

Astrology and Truth:
A Context in Contemporary Epistemology

Garry Phillipson

Supervised by: Nicholas Campion, Patrick Curry

Submitted in partial fulfilment for the award of PhD

University of Wales Trinity Saint David

2019

Abstract

This thesis discusses and gives philosophical context to claims regarding the truth-status of astrology – specifically, horoscopic astrology. These truth-claims, and reasons for them, are sourced from advocates and critics of astrology and are taken from extant literature and interviews recorded for the thesis.

The three major theories of truth from contemporary Western epistemology are the primary structure used to establish philosophical context. These are: the correspondence, coherence, and pragmatic theories. Some alternatives are discussed in the process of evaluating the adequacy of the three theories. No estimation of astrology's truth-status was found which could not be articulated by reference to the three. From this follows the working assumption that the three theories of truth suffice as a system of analysis with which to define and elucidate the issues that have arisen when astrology's truth-status has been considered.

A feature of recent discourse regarding astrology has been the argument that it should be considered a form of divination rather than as a potential science. The two accounts that embody these approaches – astrology-as-divination, and astrology-as-science – are central throughout the thesis. William James's philosophy is discussed as a congenial context for astrology-as-divination. This includes his understanding of the pragmatic theory of truth and other elements, such as radical empiricism, which comprise his pluralist pantheistic philosophy.

Compelling reasons from numerous commentators are presented according to which astrology should be judged not true. These generally presuppose that contemporary scientific modes of analysis suffice for such an evaluation. A case could be built upon James's philosophy under which the individual would have a right to believe in astrology as a source of truth – albeit, this would not be the intersubjective or scientifically-validated truth which critics typically insist upon.

Word count: 99,120

Acknowledgements

My thanks to my supervisors, Nick Campion and Patrick Curry, for their support and perseverance. Particular thanks to Kirk Little for his boundless interest and encouragement throughout this thesis's long gestation.

I would also like to thank everyone whose support kept me going in one way or another whilst I wrote. Some of the following are colleagues whose interests overlap with my own; some are friends who may have looked askance at my toils and lamentations but supported me through them anyway. Some are whippets.

Jessica Adams, Chantal Allison, Alie Bird, Carl Bishop, Bernadette Brady, James Brockbank, Peter Case, Frances Clynes, Geoffrey Cornelius, Darby Costello, Robert Currey, Anita Ebdon, Amanda Falkson, Kim Farnell, Richard Gardiner-Smith, Kay Gilbert, Dave Gilbert, Darrelyn Gunzburg, Dorian Gieseler Greenbaum, Liz Greene, Paul Harris, Maggie Hyde, Bee Kavanagh, Stephen Kavanagh, Morine Krissdóttir, Robert Mann, Karen Newton, Grant Newton, Alex Nicholson, Peter O'Brien, Giuseppe Peluso, Margaret Phillipson, Justine Rebello, Jason Rebello, Nicola Smuts-Allsop, Petra Stapp, Anthony Thorley, Mary Valiakas, John Walker, Paul Westran and Rose Youd. Last but not least, the late lamented Monty and Dave; and Higby and Dottie.

Thanks to everyone I interviewed.

Thank you to the Astrological Association; to the RGCSA (Research Group for the Critical Study of Astrology); and to the Sophia Centre for grants to cover part of the cost incurred in taking the PhD.

Table of Contents

Chapter 1: Introduction	1
1.1 The Aim, Background and Originality of this Thesis	1
1.2 Definition of ‘Astrology’	2
1.3 An Underlying Quandary	7
1.3.1 Astrology as an ‘Enemy of Truth’	7
1.3.2 Astrology Seems to Work	8
1.4 Two Versions of Astrology: as Science, and as Divination	10
1.5 Structure and Methodology of this Thesis	14
1.5.1 Interdisciplinarity; Nomothetic/Idiographic Distinction	14
1.5.2 Inadequacies of Extant Dialogue	16
1.5.3 Interviews, and the need for them	18
1.5.4 Interviews: Ethical Considerations	19
1.5.5 Reflexivity	21
1.5.6 Insider-Outsider Issues	24
1.5.6.1 Approach to Insider-Outsider Issues in this Thesis	25
1.6 My Relationship to the Material	27
1.7 Approach to Truth	30
1.7.1 Three Theories of Truth	31
1.8 William James	33
1.9 Structure of this Thesis	36
Chapter 2: Literature Review – Astrology and Truth	39
2.1 Introduction	39
2.2 Two Kinds of Astrology – Introduction, Context	39

2.3 Literature that treats Astrology as Science	46
2.4 Literature that treats Astrology as Divination	49
2.4.1 Two Forms of Divination: Artificial and Natural	53
2.4.2 The Unique Case of Interpretation	55
2.4.3 C. G. Jung and Synchronicity	56
2.4.4 Macrocosm/Microcosm	59
2.5 Failure of Dialogue	64
2.5.1 Kinds of Truth	66
2.5.2 The Nomothetic/Idiographic Distinction Revisited	69
2.6 Conclusion	71
Chapter 3: Literature Review – Philosophy	73
3.1 The Role of Philosophy	73
3.1.1 Astrology as it has appeared in Recent Philosophy Texts	74
3.1.2 Positivism	76
3.1.2.1 Relativism and Dogmatism	77
3.1.3 Truth in Philosophy	80
3.1.4 What is it that would be True or False?	82
3.1.5 Knowledge and its Relationship to Truth	86
3.1.6 Substantive Theories – Three Theories of Truth	87
3.1.6.1 The Correspondence Theory of Truth	88
3.1.6.2 The Coherence Theory of Truth	90
3.1.6.3 The Pragmatic Theory of Truth	92
3.2 Precedents for Using the Three Theories of Truth	96
3.2.1 Precedents from Discussions of Astrology	96
3.2.2 Precedents from Other Fields	97

3.3 Additional Theories and Issues	101
3.3.1 The Gettier Problem for the Definition of Knowledge	101
3.3.2 Propositional and Non-propositional Knowledge	102
3.3.3 Theories of Truth as Revelation/Disclosure	104
3.3.4 Deflationary Theories of Truth	109
3.3.5 Naïve Realism	113
3.3.6 Epistemic Pluralism	114
3.3.7 The Complexity of the Three Theories of Truth	116
3.3.8 Conclusion	118
Chapter 4: Correspondence Theory	119
4.1 Introduction to the Correspondence Theory	119
4.1.1 Intuition as a Problem	122
4.2 The Realist Version of Correspondence Theory	124
4.2.1 The Work of the Gauquelins	125
4.2.1.1 The Gauquelins' Work and Interpretive Inertia	129
4.2.1.2 The Gauquelins' Work as Social Artifact	133
4.2.2 Statistics and Uniqueness	134
4.2.3 More Complex Statistical Analysis	138
4.2.4 The Problem of Methodological Diversity in Astrology	139
4.2.5 Tests of Astrology through the Work of Astrologers	142
4.2.5.1 Tests of Astrology through the Work of Astrologers: Leo Knegt	142
4.2.5.2 Tests of Astrology through the Work of Astrologers: Vernon Clark	145
4.2.5.3 Tests of Astrology through the Work of Astrologers: Terry Dwyer	148
4.2.6 Time-Twins as a Simple Solution	150
4.2.7 Conditionality and Time-Twins	153

4.3 Non-Realist Correspondence	156
4.3.1 Meaning as Characteristic of Divination	157
4.3.2 Meaning and Correspondence Theory	159
4.4 Conclusion	161
Chapter 5: Coherence Theory Part 1 – Coherence with Science	163
5.1 Introduction	163
5.2 Definition of the Coherence Theory	163
5.3 The Definition of Science: Introduction	165
5.3.1 The Relevance of Legal Precedent to the Definition of Science	167
5.3.1.1 Issues Concerning the Term ‘Pseudoscience’	169
5.3.2 Judge Overton’s Demarcation of Science and Pseudoscience in the Case of McLean v. the Arkansas Board of Education	172
5.3.2.1 Science Defined Parts 1 and 2: Natural Law	173
5.3.2.2 Science Defined Part 3: Testability	177
5.3.2.3 Science Defined Part 4: Falsifiability	179
5.3.2.4 Science Defined Part 5: Methodology	182
5.3.3 Issues Arising from Overton’s Definition of Science	184
5.3.3.1 Objection #1 to Overton: Only one demarcation criterion is needed	185
5.3.3.2 Objection #2 to Overton: Demarcation is Innately Flawed	187
5.4 The Relevance of the ‘New Science’	189
5.4.1 The Intractability of the ‘New Science’	190
5.4.2 Quantum Physics	190
5.4.3 Chaos Theory	192
5.4.4 The Relevance of the New Science to Astrology’s Truth-Status	193
5.4.5 Philosophical Consequences of the ‘New Science’	198

5.4.6 Evolution through Natural Selection	201
5.5 Conclusion	202
Chapter 6: Coherence Theory Part 2 – Coherence with Divination	205
6.1 Introduction	205
6.2 Intuition and Types of Knowledge	206
6.2.1 Local External Intuition	207
6.2.2 Local Internal Intuition	208
6.2.3 Nonlocal Intuition	209
6.3 The Definition of ‘Paranormal’, ‘Psychic’ and ‘Psi’	210
6.3.1 Evidence for Psi, and Consequences Thereof	212
6.3.2 Two Version of Divination	213
6.4 The Central Role of Intimacy	217
6.5 Theism	220
6.6. Pantheism	221
6.6.1 Monistic Pantheism	221
6.6.2 Pluralistic Pantheism	222
6.6.2.1 The Incongruity of the Finite God	222
6.6.2.2 The Finite God: Context and Precedent	224
6.7 Consequences of Intimacy for Astrology	228
6.8 Recapitulation	231
6.9 Intimacy and the Problem of Planets	232
6.9.1 James’s ‘Pure Experience’	233
6.10 Personal Religion, Mysticism and Knowledge	235
6.10.1 Concatenated Knowledge in Divinatory Experience	238

6.10.2	The <i>Mysterium Tremendum</i>	241
6.10.3	The <i>Mysterium</i> as Part of Astrological and Divinatory Experience	243
6.11	Circularity and Isolation	247
6.12	Conclusion	251
Chapter 7: The Pragmatic Theory of Truth		253
7.1	Assertions that Astrology Works	253
7.2	Pragmatic Truth According to Peirce	256
7.3	Pragmatic Truth According to James	258
7.4	Criticisms of Jamesian Pragmatism as Relativistic	260
7.5	Accounts of Astrology as Not True but Useful	261
7.5.1	The Contested Definition of Satisfaction	265
7.6	The Case for Jamesian Pragmatism	266
7.6.1	Limits to Objectivity and Rationality	267
7.6.2	James on the Application of Science in Philosophy	268
7.7	Radical Empiricism	271
7.7.1	Radical Empiricism – Concise Definition	272
7.7.2	Percepts and Concepts	273
7.7.3	Personal Responsiveness as a Quality of the Given Order	275
7.7.4	The Mind-Cure	277
7.7.5	Psi, Magic and the Placebo Effect	279
7.8	Does Astrology Work?	283
7.8.1	The Planet Question and ‘Wrong Charts’	283
7.8.2	Experiential Evaluations of Astrology’s Utility	289
7.9	Epistemic Pluralism	295

7.10 Relativism – an Evaluation	298
7.11 The Right to Believe	303
7.12 Conclusion	306
Chapter 8: Conclusion	309
8.1 Key Terms	309
8.2 The Characterisation of Astrology	310
8.3 Theories of Truth	314
8.4 The Significance of William James for the Discussion	316
8.5 Is Astrology True?	317
8.5.1 Is Astrology-as-Science True?	318
8.5.2 Is Astrology-as-Divination True?	319
8.6 The Right to Believe	320
Bibliography	323

List of Figures

- Figure 1: Example Horoscope p. 4
- Figure 2: Distribution of Mars in 1,485 sports champions' horoscopes p. 126

Chapter 1: Introduction

1.1 The Aim, Background and Originality of this Thesis

This thesis is an investigation of claims regarding the truth-status of astrology. These claims typically come from advocates of astrology and critics of astrology. The terms ‘astrology’, ‘advocates of astrology’ and ‘critics of astrology’ are defined in the next section; ‘truth’ receives an initial definition in section 1.7, and is further discussed and characterised throughout this thesis. The enquiry presented here has grown out of my book *Astrology in the Year Zero*, in particular my contention that any evaluation of astrology ‘will be based on one’s view of issues such as: what is real; how we acquire knowledge; and how our knowledge relates to reality. In other words, philosophical issues which are as old as philosophy itself.’¹

The implications of that suggestion are pursued in this thesis, in the context of Western philosophy. The period in which this thesis has been researched and written has coincided with considerable academic investigation into different facets of astrology; in the time since I began work on the thesis in 2003, PhD theses that deal to some extent with contemporary astrology have been completed by (in chronological order) Nicholas Champion, Kelley Hunter, Alie Bird, Bridget Costello, Kirstine Munk, Geoffrey Cornelius, Bernadette Brady, James Brockbank, Elena Kozlova, Keith Burke and Frances Clynes; also an MPhil dissertation was completed by Lindsay Radermacher.²

¹ Garry Phillipson, *Astrology in the Year Zero* (London: Flare, 2000) p.195.

² Nicholas Champion, *Prophecy, Cosmology and the New Age Movement: The Extent and Nature of Contemporary Belief in Astrology* (unpublished doctoral thesis, Bath Spa University College, 2003); Kelley Hunter, *In Search of Dark Mat(t)er: A Mythopoetic Study in Imaginal Cosmology* (unpublished doctoral thesis, Empresarial University, Costa Rica, 2003); Alison Gwendy Bird, *Astrology in Education: An Ethnography* (unpublished doctoral thesis, University of Sussex, 2006); Bridget McKenney Costello, *Astrology in Action: Culture and Status in Unsettled Lives* (unpublished doctoral dissertation, University of Pennsylvania, 2006); Kirstine Munk, *Signs of the Times. Cosmology and ritual practice in modern, Western astrology* (unpublished doctoral thesis, University of Southern Denmark, 2007); Geoffrey Cornelius, *Field of Omens: A Study in Inductive Divination* (unpublished doctoral thesis, University of Kent, 2009); Bernadette Brady, *Theories of Fate among Present-day Astrologers* (unpublished doctoral thesis, University of Wales Trinity St. David, 2011); James Brockbank, *The Responsive Cosmos: An Enquiry into the Theoretical Foundation of Astrology* (unpublished doctoral thesis, University of Kent, 2011); Elena Kozlova, *A Phenomenological Enquiry into the Process and Effects of Finding Meaning with Astrological Symbolism* (unpublished doctoral thesis, Institute of Transpersonal Psychology – Palo Alto, CA, 2011); Keith Burke, *Big Five Personality Traits and Astrology: The Relationship Between the Moon Variable and the Neo PI-R* (unpublished PhD thesis, Pacifica Graduate Institute, 2012); Frances Clynes, *Cyberspace and Dualism: An Examination of the Impact of the Internet on Modern Western*

The discussion in this thesis relates to these works in a complex variety of ways. Some of the works deal with historical or anthropological issues that impinge on my theme only incidentally. Some are concerned, to greater and lesser extents, with the truth, reality, or value of astrological work and therefore are directly relevant to this thesis. The latter texts will be discussed further in the literature review in chapter 2.

The originality of this thesis consists in three characteristics: it is the first work to explore, in detail, the relevance of the three substantive theories of truth in Western epistemology to astrology; the first to pursue the consequences for astrology of the confluence of pragmatic and pantheistic thought in the works of William James; and, it draws on forty original interviews with astrologers and critics of astrology in order to explore the variety of ideas and experiences that lie behind discussion of astrology's truth.

1.2 Definition of 'Astrology'

Astrology is 'the practice of relating the heavenly bodies to lives and events on earth, and the tradition that has thus been generated' as the historian and philosopher of astrology Patrick Curry put it.³ I have adopted this, rather than one of many alternatives, as an introductory definition for this thesis because it focuses on astrology's intrinsic function, without any attempt to define how astrology would work. To illustrate this point: David Pingree defined astrology as a relationship whereby 'the planets, in their eternal rotations about the earth, transmit motion (change) to the four elements and to the assemblages of elements, animate and inanimate, in the sublunar world.'⁴ This characterises astrology as working through physical, causal forces that emanate from planets, and this is an explanatory model that will be explored in detail in what follows. My contention however is that it would be unacceptable in a study such as this to begin with such a definition, insofar as it would preclude some (non-physical,

Astrology (unpublished doctoral thesis, University of Wales Trinity Saint David, 2015); Lindsay Radermacher, *The Role of Dialogue in Astrological Divination* (MPhil dissertation, University of Kent, 2011).

³ Patrick Curry, 'Astrology' in Kelly Boyd (ed.), *Encyclopaedia of Historians and Historical Writing (Vol.1)* (London: Fitzroy Dearborn, 1999) p.55.

⁴ David Pingree, *From Astral Omens to Astrology, from Babylon to Bīkāner* (Rome: Istituto Italiano per L'Africa e l'oriente, 1997) pp. 21 – 2.

non-causal) explanations of astrology from consideration. This would render the entire study incomplete, because – as will be discussed in section 1.4 below – explanations which do not depend upon physical causality are believed to obtain by some commentators.

The form of astrology that will be discussed in what follows is the system that was substantially codified in the ancient Mediterranean countries, most famously at the hands of the astronomer, astrologer and geographer Claudius Ptolemy of Alexandria (c. 100 – c. 178 CE).⁵ In line with the prevailing convention this will be characterised as ‘Western astrology’ in order to distinguish it from other traditions such as Indian, Chinese, and Mexican astrology.⁶ It is the form of astrology most widely used in Europe and North America. Within that tradition, the focus will be on horoscopic astrology. A horoscope (example at figure 1, below) is a graphic representation of the heavenly bodies in relation to the Earth, generally (as here) with the Earth at the centre of a circle, with the signs of the zodiac in the outer ring and the planets and other celestial bodies and mathematically-derived points in the ring within that.

⁵ For Hellenistic astrology generally, and the influence of Ptolemy in particular, see: Nicholas Campion, *The Dawn of Astrology: A Cultural History of Western Astrology – Volume I: The Ancient and Classical Worlds* (London: Hambledon Continuum, 2008), Ch.13.

⁶ For common usage see e.g. the titles of these books: Jim Tester, *A History of Western Astrology* (Woodbridge: Boydell Press, 1987); Nicholas Campion, *The Dawn of Astrology, A Cultural History of Western Astrology: Volume I: The Ancient and Classical Worlds* (Hambledon Continuum, London 2008); Nicholas Campion, *The Medieval and Modern Worlds: History of Western Astrology Volume II* (London: Continuum, 2009). For a summary of the other traditions mentioned here, see: Nicholas Campion, *Astrology and Cosmology in the World's Religions* (New York University Press, 2012) pp. 13 – 14.

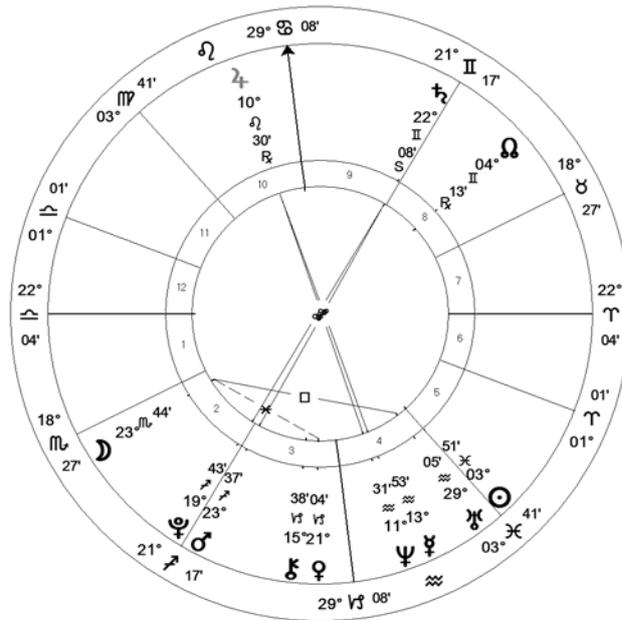


Figure 1

Horoscopic astrology is the practice of analysing horoscopes in order to gain insight into the entity – for example a person, a country, an organisation or a question – that came into existence at the time, date and place represented by the horoscope.⁷ People who work as consultant astrologers may discuss, with reference to their clients’ charts, issues such as family background, career and relationship issues, aptitudes and problem areas, generally with the aim of helping the client to make the best of their life. There are however many different ways in which astrology can be applied and some examples of this work will be cited in chapters 4 to 7.

The particular significance of the focus on horoscopic astrology is that Sun-sign astrology – the simplified form usually encountered in newspapers and magazines, which is often conflated with astrology per se, but which has only emerged since 1930 – is thereby bypassed.⁸ In taking this approach I follow the anthropologist of astrology Alie Bird who defined the research subject for her thesis as ‘*real* astrology, a term I use

⁷ The history and usage of the term ‘horoscopic astrology’ will be discussed in chapter 2.

⁸ Failures amongst some of astrology’s critics to discriminate between Sun-sign columns and horoscopic astrology will be cited in chapter 3. The origin of, and controversy surrounding, the contemporary newspaper Sun-sign column is discussed at e.g. Campion, *Prophecy, Cosmology* particularly chapter 7 (pp. 132 – 151); Kim Farnell, *Flirting with the Zodiac* (Bournemouth: Wessex Astrologer, 2007) pp.117 – 142; Campion, *Medieval and Modern Worlds*, pp. 259 – 261.

to differentiate it from its lightweight relative which, as a result of the widespread media exposure enjoyed by its Sun-sign horoscopes and entertainment forecasting, constitutes the public's idea of what astrology is.'⁹ This also concurs with the suggestion by one of astrology's most eminent critics, Geoffrey Dean (a technical writer and editor with a PhD in analytical chemistry) that in order to 'rise above the present shouting match' between advocates and critics of astrology, 'We have to go beyond the *popular* astrology of fairground tents and newspaper columns and seek out the *serious* astrology of consulting rooms and learned journals.'¹⁰ In similar vein Paul Thagard, a philosopher and critic of astrology, argued:

It would be most unfair to evaluate astrology by reference to the daily horoscopes found in newspapers and popular magazines. These horoscopes deal only with sun signs, whereas a full horoscope makes reference to the "influences" also of the moon and the planets, while also discussing the ascendant sign and other matters.'¹¹

The validity of Sun-sign work is in itself a matter of disagreement between astrologers. For instance the astrologer Dennis Elwell (1930 – 2014) stated that he would never write such a column because 'I would fear for my immortal soul. I think a special place in hell is being warmed over for those who cynically trivialise a great truth...'¹² On the other side of the argument, the historian and anthropologist of astrology Nicholas Champion argued that 'Sun-sign astrology is no less real than any other application of judicial astrology.'¹³

This debate notwithstanding, my focus in this thesis will be upon astrology in the sense of horoscopic astrology. By doing this I bypass the debate regarding Sun-sign astrology to focus on the form that – as has just been seen – is often taken to hold the most promise as a source of truth.

⁹ Bird (2006), p.80. Original emphasis.

¹⁰ Geoffrey Dean, 'Does Astrology Need to be True? Part 1: A Look at the Real Thing' *Skeptical Inquirer* Vol. 11 No. 2 (Winter 1986-7), p.167.

¹¹ Paul R. Thagard, 'Why Astrology is a Pseudoscience', *PSA: Proceedings of the Biennial Meeting of the Philosophy of Science Association, Vol. 1: Contributed Papers* (1978), p. 223.

¹² Dennis Elwell quoted in Phillipson, *Astrology Year Zero*, p. 36

¹³ Nicholas Champion quoted in Phillipson *Astrology Year Zero*, p. 36. The significance of 'judicial astrology' will be explored in chapter 3.

When discussing perspectives on astrology's truth-status I will use the terms 'advocates of astrology' and 'critics of astrology' (shortened on occasion to 'advocates' and 'critics') to refer, respectively to: commentators who argue that astrology can be a source of significant truth; and commentators who contend that astrology as currently practised is not a source of significant truth. The term 'critics' is used in preference to 'sceptics' ('skeptics' in American usage), a term often used in self-reference by critics of astrology.¹⁴ The term harks back to Pyrrhonian scepticism, which advocated the withholding of all belief – as when, for instance, Sextus Empiricus (c. 160 – 210 CE) asserted, 'we neither deny nor affirm anything.'¹⁵ In a discussion of scepticism, Campion cited an instance of astrological research being dismissed out of hand and remarked, 'this is not so much scepticism as negative dogmatism'.¹⁶ In the light of such critiques (more will be considered in chapters 4 and 6), it seems best to withhold the term 'sceptic' because to use it is, implicitly, to prejudge the status of the critics' positions. The use of the binary pair of terms – 'advocates' and 'critics' – should not be allowed to obscure the multiplicity of positions that exists amongst all commentators on astrology: the picture is complex, as has already emerged somewhat and as will emerge further as the thesis progresses.

Astrology enjoys a level of popularity in modern society that justifies continuing enquiry into the issues it raises. For instance Gallup polls in America, Canada and the UK, conducted in 2005, suggest that 25% of people in each country believe in 'Astrology, or that the stars and planets can affect people's lives'.¹⁷ Further, Campion suggested that this figure may be an underestimate and – whilst acknowledging the flexibility of the term 'belief' – argued that polls showing 70% of people to believe in astrology may be nearer the mark, depending on how the question is asked. In all

¹⁴ As seen for example in the name of the *Committee for Skeptical Inquiry* and its journal, *Skeptical Inquirer* (<http://www.csicop.org/si> - checked 15th April 2017) which are regularly critical of astrology.

¹⁵ Sextus Empiricus, *Outlines of Pyrrhonism*, Book 1.4 (this translation: Benson Mates, *The Sceptic Way: Sextus Empiricus's Outlines of Pyrrhonism* (New York: Oxford University Press, 1996) p. 90.

¹⁶ Nicholas Campion, *Astrology and Popular Religion in the Modern West: Prophecy, Cosmology and the New Age Movement* (Farnham: Ashgate, 2012) p. 95.

¹⁷ Alec Gallup, Frank Newport (eds.), *The Gallup Poll: Public Opinion 2005* (Lanham, MD: Rowman & Littlefield, 2007) p.221. Repeated at: <http://www.gallup.com/poll/19558/paranormal-beliefs-come-supernaturally-some.aspx> (checked 12th August 2019). Campion referred to earlier polls in the UK, USA and France which also yielded a 25% acceptance rate for astrology: Campion, *Astrology and Popular Religion*, p.1 & p.157 – full analysis of sources is in the note to table 11.5 at p.157.

events, he remarked, astrology had become ‘an essential part of the language of popular culture and mass psychology.’¹⁸

1.3 An Underlying Quandary

In order to frame a quandary that informs this thesis, two responses to astrology need to be stated: First, many commentators consider it impossible that astrology could provide any significant truth, and regard this as overwhelmingly obvious; Second, many people find that when it is used, astrology *seems* to provide significantly truthful information. Although a fuller treatment of both issues awaits in subsequent chapters, both need to be examined briefly now, for the dilemma they constitute is central.

1.3.1 Astrology as an ‘Enemy of Truth’

In a newspaper article published in 1995, the biologist and writer on science Richard Dawkins argued that ‘astrology is neither harmless nor fun, and... we should fight it seriously as an enemy of truth.’¹⁹ Although Dawkins presented arguments intended to demonstrate the impossibility of astrology providing truth, he also regarded this case as sufficiently obvious that he concluded the article by asking, ‘Why, actually, are professional astrologers not jailed for fraud?’²⁰ The implication here seems to be that no contemporary Westerner in their right minds could seriously regard astrology as a means of gaining true information. Dawkins’ arguments will be considered in the following chapters; for the purposes of this introduction the significant point is that his is a common attitude. Thus when astrology is discussed in the media, writers often assume that it can and should be treated dismissively. For instance:

...the astrologers’ failure [to predict 9/11] will not surprise anyone acquainted with the essential idiocy of their occupation...²¹

¹⁸ Campion, *Astrology and Popular Religion*, p.160. Discussion of the 70% figure particularly at p. 133, pp. 150 – 165.

¹⁹ Richard Dawkins, ‘The Real Romance in the Stars’, *Independent on Sunday*, 31 December 1995, p.18. The article was substantially repeated in chapter 6 of Dawkins’ *Unweaving the Rainbow: Science, Delusion and the Appetite for Wonder* (London: Allen Lane, 1998).

²⁰ Dawkins, ‘Real Romance’, p.18.

²¹ Bennett, Catherine, ‘Is Bin Laden a Pisces – or is he Cancer?’, *Guardian*, 13th December 2001, p.5.

Or, again:

The infection [i.e. astrology] has spread, way beyond the intellectual slums in which it had its origins, to neighbourhoods that would once have been immune. *The Observer* touts a special astrological feature... In *The Guardian's* Media section, a peerlessly vacuous feature brings astrological flummery to the world of commerce... That this is a disease – a kind of scabies of the intellect – seems unarguable to me, even if its most serious consequence is mere mental disfigurement.²²

Many more examples could be cited. The reaction against astrology by some commentators is so extreme that the question arises, whether astrology is then treated as *heresy* against a scientific world-view. I have argued that this is the case in a recent article.²³ Given the vehemence with which it is often dismissed, it seems necessary to dwell on the fact that, experientially, astrology can at least *seem* efficacious.

1.3.2 Astrology Seems to Work

Geoffrey Dean is one of the best-informed critics of astrology, having learned and practised horoscopic astrology and devoted many years to its analysis from a scientific perspective. His status as an investigator, and critic, of astrology was established by the publication in 1977 of *Recent Advances in Natal Astrology* and he has authored and co-authored many texts on astrology from then to date.²⁴ He has been described as ‘probably the leading critical investigator of astrology in the world’.²⁵ Together with two of his fellow critics of astrology, Arthur Mather and Rudolf Smit, he stated that in the early days of their involvement with astrology,

²² Thomas Sutcliffe, ‘It’s in the Stars’, *Independent*, 9th January 2002. This article is quoted in Roy Willis and Patrick Curry, *Astrology, Science and Culture* (Oxford: Berg, 2004), p.96.

²³ Garry Phillipson, ‘Astrology as Heresy in Contemporary Belief’ *Journal for the Study of Religion, Nature and Culture* 13.1 (2019), pp. 12 – 30.

²⁴ Geoffrey Dean, assisted by Arthur Mather and 52 collaborators, *Recent Advances in Natal Astrology: A Critical Review, 1900 – 1976* (Subiaco, Western Australia: Analogic, 1977). A note on usage: In addition to some texts written under his own name, Geoffrey Dean has also co-written texts on astrology, and participated in collaborative interviews on astrology, with a number of different co-authors in various combinations. The full names of the individuals involved in each of the numerous articles etc. to be cited in this thesis would impair its readability were they to be cited fully in the body text at each citation. For texts in which multiple individuals collaborated with Dean, I will generally therefore use ‘Dean et al’ to refer to all the groups in question, with more details of the contributors in the relevant footnotes.

²⁵ Bryan Farha in Bryan Farha (ed.), *Pseudoscience and Deception: The Smoke and Mirrors of Paranormal Claims* (Lanham, Md.: University Press of America, 2014) p. 171. Farha attributed the quotation to the professor of philosophy and secular humanist Paul Kurtz (1925 – 2012) but without a reference and I have not been able to verify this attribution.

...we calculated charts, saw that they seemed to work, and were hooked. Astrology became our passion... we became more and more convinced that astrology worked. Nothing we saw or experienced told us otherwise. Astrologers were generally nice people, they seemed intelligent and well-educated, they spoke from the heart, and they based everything on practical experience.²⁶

And yet, when they began to test astrology, 'We were dismayed to find that artifacts and errors seemed to explain everything. Our beautiful world of astrology began to collapse.'²⁷ Regardless of their eventual disillusionment, these eminent critics have known the experience that astrology works, or at least seems to work.

The astrologer Deborah Houlding began with an attitude of disbelief towards astrology. She told me that, before exploring the subject at all, 'I saw astrology as something only the "loopy set" believed in.'²⁸ Even after some time learning and practising astrology in an evening class, 'I was convinced that people placed too much emphasis on comments that essentially applied to everyone. I was very sceptical...'²⁹ For two years after her introduction to astrology she continued 'suspending my disbelief for the sake of the pleasure it gave me to study it', at the end of which period, 'I remember being struck by the realisation that astrology actually works! [...] It was a very powerful moment in which I let go of my innate disbelief, suddenly realised I loved astrology, and trusted it completely.'³⁰ In Houlding's case, the conviction of astrology's efficacy was slow to arise and did so in the face of her self-diagnosed scepticism.

A similar case is the astrologer Bernadette Brady, who said that her initial attitude towards astrology was that 'the whole thing was a load of garbage'.³¹ Having acquired an astrology book for the astronomical data it contained, she followed its instructions on how to calculate and interpret horoscopes. She recalled: 'I took the attitude of, "I'm going to disprove this."' After comparing numerous horoscopes to the people they were

²⁶ Geoffrey Dean, Arthur Mather and Rudolf Smit describing their experience in Phillipson, *Astrology Year Zero*, p.125. Although the interview was with five critics of astrology, they explained on the page cited that three of them - Dean, Mather and Smit - actually learned astrology.

²⁷ Phillipson, *Astrology Year Zero*, p.126.

²⁸ Deborah Houlding, interview 2005.

²⁹ Deborah Houlding, interview 2005.

³⁰ Deborah Houlding, interview 2005.

³¹ Phillipson, *Astrology Year Zero*, p.21

for, however, she found that ‘The damned stuff kept working – that’s what really annoyed me.’³²

Where Dean, Mather and Smit moved from the position that astrology worked, to the position that it only *seemed* to work, Houlding and Brady followed a diametrically opposed trajectory, arriving at a conviction that astrology worked. In each case, a dilemma arose from the experience that astrology seemed to deliver true statements, whilst at the same time the provenance of those statements was inherently implausible and problematic as a source of truth. The philosophical stresses contained in that dilemma are the context for this thesis. One consequence of their existence is the development of competing accounts of what astrology is and how, therefore, its truth should be evaluated.

1.4 Two Versions of Astrology: as Science, and as Divination

Different accounts of astrology’s nature may entail different approaches to the evaluation of its truth-status. In this thesis I will distinguish between two accounts: astrology-as-science, and astrology-as-divination. This distinction is manifest in the way the subject is defined in two contemporary encyclopaedias: *Wikipedia* states that ‘Astrology is now recognized to be pseudoscience’ – which assumes that astrology could only be a science or a failed attempt at science – whilst the *Encyclopedia Britannica*’s definition begins, ‘Astrology, type of divination...’³³ There is a range of opinions amongst astrologers, exemplified in Campion’s surveys which show that the percentage of astrologers at conferences who would define the subject as ‘a science’ varied with different cohorts from 24.5% to 87.5%, whilst those who would define it as ‘a form of divination’ ranged from 15.2% to 72.9%.³⁴

In order to characterise these different accounts I will draw particularly on the thought of the astrologer, and philosopher of astrology, Geoffrey Cornelius. The significance of

³² Phillipson, *Astrology Year Zero*, p.21

³³ Wikipedia contributors, 'Astrology', *Wikipedia, The Free Encyclopedia*, <https://en.wikipedia.org/w/index.php?title=Astrology&oldid=909527658> (accessed 12 August 2019); Pingree, David E., and Robert Andrew Gilbert, ‘Astrology’, *Encyclopaedia Britannica*, <https://www.britannica.com/topic/astrology> (accessed 12th August 2019).

³⁴ Campion, *Astrology and Popular Religion*, p. 178

Cornelius's work is suggested by the anthropologist Roy Willis's remark that his encounter with contemporary Western astrology, under the influence of Cornelius's book *The Moment of Astrology*

led me into an encounter with a set of ideas, indeed a whole climate of theories and paradigm-challenging insights, strangely congruent with the philosophical radicalism associated with those anthropologists, including myself, who are presently seeking to interpret their first-hand experience of 'spirit' phenomena in Africa and elsewhere.³⁵

The astrologer, philosopher of astrology and historian of astrology Robert Hand wrote that *The Moment of Astrology* is:

One of the most important astrological books of our time. It not only reshapes the view of astrology that astrologers might have; it challenges the entire notion of what constitutes knowing and knowledge in our civilization. It shows that astrology is not only important in and of itself, but also for what it reveals about the nature of truth and our experience of it in general.³⁶

The work of Cornelius, his partner Maggie Hyde, and the organisation they founded – 'The Company of Astrologers' – is cited in several recent doctoral theses about astrology including those by Bird, Brockbank, Greenbaum, and Munk.³⁷ The distinction between astrology-as-science, and astrology-as-divination, is central in Cornelius's work.³⁸ To take astrology as science first: Cornelius argues that this approach 'seeks a "hard science" definition for astrology. The orientation is towards physics, and/or empirical psychology, and the favoured methodology is statistics.'³⁹

The definition of science, and its relationship to theories of truth and to astrology, is complex and will be discussed in detail in this thesis, particularly in chapters 4 and 5.

³⁵ Roy Willis in Willis & Curry, *Astrology Science Culture*, p. 23.

³⁶ Robert Hand quoted in: Geoffrey Cornelius, *The Moment of Astrology* (2nd edn.) (Bournemouth: Wessex Astrologer, 2003), back cover.

³⁷ E.g. Bird (2006) recounted her experience of studying with the Company of Astrologers, pp. 31 – 5; Brockbank (2011) introduced Cornelius and Hyde's conception of astrology-as-divination, pp. 57 – 9; Dorian Greenbaum, *The Daimon in Hellenistic Astrology* (unpublished thesis, The Warburg Institute, University of London, 2009) cited Cornelius on astrology-as-divination, p. 91 n. 261 and p. 251 n. 179, as did Munk (2007), p. 111.

³⁸ Posited in these terms at: Geoffrey Cornelius, Maggie Hyde and Chris Webster, *Astrology for Beginners* (Cambridge: Icon, 1995) and discussed in detail throughout Cornelius, *Moment of Astrology*.

³⁹ Cornelius, *Moment of Astrology*, p.45. (Cornelius uses the term 'scientific astrology' here; this is a cognate of 'astrology as science'.)

For now, the salient feature of science vis-à-vis astrology can be illustrated by reference to a characterisation by the philosopher of science Karl Popper (1902 - 94) of what constitutes a scientific statement:

Only when certain events recur in accordance with rules or regularities, as is the case with repeatable experiments, can our observations be tested – in principle – by anyone. We do not take even our own observations quite seriously, or accept them as scientific observations, until we have repeated and tested them. Only by such repetitions can we convince ourselves that we are not dealing with mere isolated ‘coincidence’, but with events which, on account of their regularity and reproducibility, are in principle inter-subjectively testable.⁴⁰

If this were the only way of thinking about the truth of astrology, the role of philosophy as regards astrology’s truth-status would be the secondary one of reviewing the design of tests and the analysis of their results. The primary role would belong to statistical analysis.

Cornelius, while not denying the possibility that scientific analysis of astrological data may yield true information, insists that the view of astrology as divination is more fundamental: ‘the main body of astrology’s practice, and especially the interpretation of horoscopes, is properly to be understood as a form of divination. It is divination despite all appearances of objectivity and natural law.’⁴¹ The opposition that Cornelius thus posits between divination on one side and ‘objectivity and natural law’ on the other is key to the definition of ‘divination’ as he uses the term. A definition of divination from Curry, which is consonant with that of Cornelius, will serve to draw out the implications of the view of astrology-as-divination:

divination is a ritual (synchronically) and a tradition (diachronically) constituted by, and constituting, an ongoing dialogue with more-than-human agents. It is enacted in order to ask them for guidance and/or discern their will in the matter at hand, to enable them to respond, and

⁴⁰ Karl Popper, *The Logic of Scientific Discovery* (London: Routledge, 2002 [1959 for first English edition; 1935 for first publication as *Logik der Forschung*]) p.23. Popper suggests that his ideas follow those of Kant, though the relationship is not entirely as he thought – see Sergio L. de C. Fernandes (ed. Robert S. Cohen), *Foundations of Objective Knowledge: The Relations of Popper’s Theory of Knowledge to that of Kant* (Dordrecht: Kluwer, 1985) pp. 165-67.

⁴¹ Cornelius, *Moment of Astrology*, p. xxii.

to permit intelligible interpretation of the response. An indefeasible part of the ritual, following from those requirements, is an act of aleatory randomization.⁴²

The model of dialogue with ‘more-than-human-agents’ would invalidate inter-subjective testing of astrological readings, for the person using divination under this account is not simply accessing information – as if reading the results of a search on Google – but is entering into dialogue, which is liable to change dependent on the approach of each party to the dialogue and on the nature, consequently unique, of that interaction. Hence, for instance, Cornelius asserted that ‘the methods of interpretation given in divinatory systems such as the *I Ching* can hardly be compared with the universal laws sought in science, since the significance of each divination lies precisely in the unique circumstances in which the case arises.’⁴³ It is this quality of uniqueness that characterises divination for Cornelius – as when, for instance, he stated that ‘the principle of the *unique case*... is at the heart of divinatory astrology. It refers to that experience of reality that is essentially and of its nature irreducible to quantification.’⁴⁴ He defined this as antithetical to statistical analysis: ‘Whatever significance is involved [in divinatory interpretation of a horoscope], it is not amenable to scientific verification, and it is completely unreplicable. The significance of the unique case exists once and once only in the context in which it is interpreted.’⁴⁵ This definition characterises divination, and therefore much of astrology, as fundamentally different from science in Popper’s definition; Cornelius’s ‘unique case’ precisely excludes Popper’s ‘events which, on account of their regularity and reproducibility, are in principle inter-subjectively testable.’⁴⁶

To the extent that it is seen as divination, astrology is close to being a form of religious practice. This can be seen when, for instance, Cornelius suggested that ‘In its transmission from the Greeks astrology achieves the imagination of an ensouled cosmos revealing divine intention (its *why*)’.⁴⁷ Further, that ‘Divination has always been a companion of practical philosophy or practical religion’; and, that ‘Christians and

⁴² Patrick Curry, ‘Embodiment, Alterity and Agency’ in Patrick Curry (ed.), *Divination: Perspectives for a New Millennium* (Farnham: Ashgate, 2010), pp.114-5.

⁴³ Cornelius, *Moment of Astrology*, pp.186-7.

⁴⁴ Cornelius, *Moment of Astrology*, p. 190

⁴⁵ Cornelius, *Moment of Astrology*, p. 195

⁴⁶ Popper, *Logic of Scientific Discovery*, p. 23.

⁴⁷ Cornelius, *Field of Omens*, p.8.

astrologers share “the task of interpreting the ‘divine sign’, which is the original literal meaning of divination.”⁴⁸ The relevance of religious thought to astrology will be particularly focused on in chapter 6.

1.5 Structure and Methodology of this Thesis

The different perspectives on what astrology is, and how its truth-status should therefore be evaluated, raise several structural and methodological challenges. I will now consider these and the approach I have taken.

1.5.1 Interdisciplinarity; Nomothetic/Idiographic Distinction

In order for it to be capable of investigating the truth-status of astrology, this is necessarily an interdisciplinary thesis. It involves ethnography, epistemology, metaphysics, philosophy of science, and philosophy of religion. The benefits of an interdisciplinary approach were identified by the researcher in theology Fiona Darroch as overcoming ‘blindness to alternative modes of analysis... by balancing between two or more positions, by speaking across several discourses, and by listening to the dialogue taking place across disciplinary borders.’⁴⁹

The primary division to be negotiated is that between the views of astrology-as-science, and astrology-as-divination. Several dichotomies could be cited that offer parallels; the one I shall focus on is the distinction posited by the German philosopher Wilhelm Windelband (1848 – 1915) between *nomothetic* and *idiographic* approaches.⁵⁰ The terms are derived from the Greek words ‘nomos’ meaning ‘law’, and ‘idios’ meaning ‘private’. In Windelband’s original definition, both are modes of scientific thought, oriented towards ‘the general in the form of the law of nature or the particular in the

⁴⁸ Cornelius, *Moment of Astrology*, p.278; Cornelius, *Field of Omens*, p.206.

⁴⁹ Fiona Darroch, *Memory and Myth: Postcolonial Religion in Contemporary Guyanese Fiction and Poetry* (Amsterdam: Rodopi, 2009) pp. 19 - 20.

⁵⁰ Wilhelm Windelband (tr. Guy Oakes), ‘Rectorial Address, Strasbourg, 1894’ *History and Theory* Vol. 19, No. 2 (Feb. 1980), pp. 169 – 185. Source of translated text: Wilhelm Windelband, ‘Geschichte und Naturwissenschaft’ *Präludien* Band 2 (Tübingen: Möhr, 1924) pp. 136 – 160.

form of the historically defined structure' in the cases of nomothetic and idiographic approaches respectively.⁵¹

The definition of the terms acquired a life of its own after Windelband's original formulation. For him, 'this methodological dichotomy classifies only modes of investigation, not the contents of knowledge itself.'⁵² As Charles Bambach put it, the terms were intended as 'methodological distinctions, not absolute ones.'⁵³ Subsequent usage has however seen an interpretative drift such that the terms have tended to become descriptors of irreducible characteristics of the world. This approach was evident when, for instance, the sociologist Immanuel Wallerstein wrote:

The argument of the idiographic school is the ancient doctrine that 'all is flux'. If everything is always changing, then any generalization purporting to apply to two or more presumably comparable phenomena is never true... Conversely, the argument of the nomothetic school is that it is manifest that the real world (including the social world) is not a set of random happenings. If so, there must be rules that describe 'regularities', in which case there is a domain for scientific activity.'⁵⁴

Wallerstein thus represented the idiographic-nomothetic distinction as referring to versions of how the world really is; as an ontological issue, therefore. This approach can also be seen in a discussion of prayer and miracle from the professor of psychology Richard L. Gorsuch. He remarked that in Christianity, 'God operates on an idiographic, individual level as well as on the level of nomothetic law.'⁵⁵ In this analysis science is intrinsically incapable of judging the truth-status of acts of God, because 'the method of science is replication. If it replicates, then a scientific conclusion can be drawn. If it does not replicate, then no scientific conclusion can be drawn. By definition, God's individual acts do not replicate. So science can never identify them...'⁵⁶ It would be possible to extrapolate from Gorsuch's understanding of prayer in terms of 'idiographic truth', to an understanding of astrology-as-divination which would thereby be

⁵¹ Windelband, *Rectorial Address*, p. 175.

⁵² Windelband, *Rectorial Address*, p. 175.

⁵³ Charles Bambach, 'Neo-Kantianism' in Aviezer Tucker (ed.), *A Companion to the Philosophy of History and Historiography* (Malden, MA: Wiley-Blackwell, 2009) p. 480.

⁵⁴ Immanuel Wallerstein, 'World-Systems Analysis' in Anthony Giddens and Jonathan H. Turner (eds.), *Social Theory Today* (Stanford University Press, CA, 1987) p. 314.

⁵⁵ Richard L. Gorsuch, *Integrating Psychology and Spirituality?* (Westport, Conn: Praeger, 2002) p. 65.

⁵⁶ Gorsuch, *Integrating Psychology*, pp. 65 – 66.

characterised as existing beyond the epistemological jurisprudence of science.⁵⁷ This possibility will be further discussed in chapter 2. In terms of the structure and methodology of this thesis, in order accurately to characterise the extant discussion it is necessary to allow the possibility that idiographic truth may be relevant in this way; it is also necessary to allow that the truth-status of astrology can and should be entirely understood within a nomothetic framework. Both views are – as will be shown – found in discussions of astrology’s truth-status, and a genuinely interdisciplinary approach must therefore entertain both possibilities, without prejudgement.

1.5.2 Inadequacies of Extant Dialogue

There has been a failure of dialogue between astrologers and their critics, arising largely from their different orientations towards the subject. Many astrologers are not especially interested by the question of why astrology would work, nor by the consequences of this for its truth. This lack of interest was remarked upon by the astrologer Robert Hand in 1989. Speaking at a conference of astrologers, he acknowledged that many of Geoffrey Dean’s criticisms of astrology were valid, and continued: ‘We do not in fact formulate any alternative to conventional scientific investigation. The reason is very simple. Most of us aren’t scientists. Most of us aren’t philosophers. Most of us are people who apply a craft at a rather practical level.’⁵⁸ The tendency of astrologers not to investigate astrology at a philosophical level was also reported by Alie Bird: ‘In my experience, the majority of practical astrologers do not spend much – if any – time assessing their practice from an exterior perspective as a social commentator might.’⁵⁹ She judged that, as a consequence of this, astrologers often invoked science as the basis for astrology without having fully thought through the consequences of this claim: ‘many astrologers, if cornered by persistent sceptics at parties, will invoke science as an uncertain ally rather than admit to the divinatory nature of their practice.’⁶⁰

⁵⁷ The term ‘idiographic truth’ is used at e.g. Gorsuch, *Integrating Psychology*, p. 53; John Swinton and Harriet Mowat, *Practical Theology and Qualitative Research* (2nd edn.) (London: SCM Press, 2016) p. 42.

⁵⁸ Robert Hand, ‘The Proper Relationship of Astrology and Science – Part II. The 1989 Carter Memorial Lecture.’ *The Astrological Journal* Vol. XXXII no. 2 (March/April 1990) p.99

⁵⁹ Bird, *Astrology in Education*, p.91.

⁶⁰ Bird, *Astrology in Education*, p. 111.

A related issue is that the way astrologers talk about astrology is potentially misleading. Thus for example Nick Campion suggested to the influential astrologer Liz Greene that under her understanding of astrology, it would be incorrect for astrologers to say that they are having a bad time *because* of Saturn's current position in the sky (the planet's 'transit'). Greene replied: 'Well, I say it too. But I know what I mean when I say it. To talk like that doesn't really communicate what is going on. It is shorthand. We don't have a bad time because of a transit. The transit is just a symbolic signature of what we are experiencing.'⁶¹ A similar issue, in discussions amongst magicians rather than astrologers, was noted by Luhrmann in her study of members of a magical order in the contemporary West:

All participants seem to have somewhat different ideas about what rituals do and why, and their differences are not sufficiently troublesome to cause any member of the group much concern... It is foolish to think of members of these groups as individually maintaining some list of theoretical assumptions even when the assumptions seem to be explicit. They talk at some times as if one particular way of characterizing the world were correct, and within certain limits they are not severely challenged. But the assumptions which remarks imply are not always the exact form of the premises for which the magician would argue.⁶²

For astrologers, as for Luhrmann's magicians, prevalent modes of discourse can unintentionally obfuscate the nature of the subject. This makes it difficult to evaluate astrology's truth-status in a way that is consonant with astrologers' views, because those views are disparate and in many cases not completely articulated.

On the side of astrology's critics, a major problem faced by anyone who would address the failure of dialogue identified above is that in many cases it is seen as acceptable to dismiss astrology as false in a peremptory fashion. Further examples of this will be furnished in chapter 3 through the philosopher Saul Kripke, and in chapter 4 through the physicist David Mermin. For the purposes of this chapter it will suffice to observe that astrology is often treated dismissively, with no acknowledgement of the experience of

⁶¹ Liz Greene, Nicholas Campion (interviewer), 'An Interview with Liz Greene – Part Two: The Lens of Astrology', *The Mountain Astrologer* (Issue 101, Feb/Mar 2002) pp. 39.

⁶² T. M. Luhrmann, *Persuasions of the Witch's Craft: Ritual Magic in Contemporary England* (Cambridge, MA: Harvard University Press, 1989) p.164.

astrologers that astrology seems to work, and that this pre-empts dialogue. I should add that this characterisation does not apply to all critics of astrology, and in this thesis I will draw heavily on commentators who could not reasonably be accused of this failing.

1.5.3 Interviews, and the need for them

As a way of addressing the lack of clarity – noted above - in much astrological discourse about how astrology is believed to work, I have recorded forty interviews with astrologers and with critics of astrology to supplement the existing literature. These were recorded between June 2004 and March 2008 and vary in length between 2,000 and 12,000 words. The function of the interviews in this thesis is to exemplify the variety of perspectives in existence amongst astrologers and critics towards astrology’s truth-status – following the philosopher and psychologist William James (1842 – 1910) when he noted, apropos his extensive use of first-person accounts in *The Varieties of Religious Experience*: “examples will bring this home to one better than abstract description...”⁶³.

There is a plurality of incompatible positions regarding astrology, and a factor in my choice of participants was a desire to document this variety of perspectives, so as to give the reader a living sense of the range of perspectives in existence. I therefore sought out interviewees with as broad a range of views as possible. In addition to direct approaches to individuals, invitations were placed in astrological magazines from the USA and UK – respectively, *The Mountain Astrologer* and *The Astrological Journal* - for astrologers who would be willing to answer some questions.

The number of astrologers interviewed is considerably greater than the number of critics – thirty-eight astrologers to five critics. (The apparent discrepancy between these figures and the total of forty interviews is accounted for by the fact that four critics collaborated on one interview.)

⁶³ William James, *The Varieties of Religious Experience: A Study in Human Nature* (London: Penguin, 1985 [1902]) p.64.

I interviewed more astrologers than critics for two reasons. First, as I knew from recording the interviews for my book *Astrology in the Year Zero*, there is greater variety and sometimes less clarity in astrologers' discussion of astrology's truth-status; both factors which argue in favour of a larger number of respondents. Second, I chose to interview critics who have some experience of astrology. In addition to interviews recorded specifically for this thesis I have also drawn on the interviews (twenty-eight in total) recorded for my book, provided the respondents specifically gave permission for me to use the interviews in subsequent work.

1.5.4 Interviews: Ethical Considerations

The ethical issues surrounding interviews in this field are complex. In characterising the issues facing an ethnographic study of astrologers Kirstine Munk quoted the anthropologist Michael Jackson:

In every human society, the range of experiences that are socially acknowledged and named is always much narrower than the range of experiences that people actually have. By implication, no worldview ever encompasses or covers the plenitude of what is actually lived, felt, imagined, thought. The vantage points from which we customarily view the world are, as William James puts it, "fringed forever by a *more*" that outstrips and outruns them.⁶⁴

In this context, Munk suggested that astrological consultations provide 'a setting enabling people to talk about issues that otherwise rarely surface in everyday conversation' and remarked on the need to present 'these marginal experiences' in such a way as to 'honour the autonomy and vulnerability of the people who have lent me their stories.'⁶⁵ This expresses very well my perspective in interviewing both astrologers and critics of astrology, and in this study I have several measures in place to ensure as far as possible that my respondents are treated with respect, which I will now describe.

⁶⁴ Michael Jackson, *The Politics of Storytelling: Variations on a Theme by Hannah Arendt* (2nd edn.) (Copenhagen: Museum Tusulanum Press, 2013) pp. 41 – 2. Cited in Munk, *Signs of the Times*, p. 61 n. 84 (Munk refers to the first edition of the text from 2002). The quotation from James is from: William James, *The Meaning of Truth: A Sequel to 'Pragmatism'* in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1909]) p. 888.

⁶⁵ Munk, *Signs of the Times*, p. 61.

The only material used to characterise the positions of astrologers and their critics are those made during interviews. No material gathered in participant-observer mode (for instance in social gatherings of astrologers) is included. In the context of this thesis, the approach of only quoting from interviews serves two purposes: by not including statements from people who were ‘off guard’ an ethical safeguard is provided; also, it tends to preclude ‘shorthand’ statements – the kind referred to by Liz Greene in section 1.5.2 above – which astrologers might use between themselves but which they would not take to be accurate models of what astrology is and how its truth-status should be characterised. In addition, each interviewee was able to review a transcript of their interview and make any changes they wished before giving permission for it to be used. This measure provides a further safeguard at both ethical and philosophical levels, helping to ensure that interviews would only contain material the interviewee was happy to espouse in the public domain.

When I first mooted an interview to each potential respondent, I told them that they would have the opportunity to read through it and make any changes and deletions they wanted; that we could pass over any question they preferred not to answer; and further, that the interview would not be used by me in any way at all unless they gave their imprimatur on my ‘Interview Authority Form’. The form gave interviewees the option to limit exposure of the interview to my thesis only, or to include the option that it could be used in other research, and/or to include the option of separate publication. Interviewees were also given the option to appear anonymously in each context.

The format of the interviews is open-ended and semi-structured: that is to say, I had some questions that I wanted to ask each informant, together with a range of additional questions arising from their backgrounds and their responses to questions during the interview.⁶⁶ Some interviews took place in person and some were conducted via e-mail. The thinking behind the methodology employed is as follows: I am not trying to model a representative population of astrologers. Given the volatility of ideas regarding astrology suggested here, the approach taken to the interviews is qualitative, in line with Bryman’s account whereby

⁶⁶ The terms ‘open-ended’ and ‘semi-structured’ are used here as at e.g. H. Russell Bernard, *Research Methods in Anthropology – Qualitative and Quantitative Approaches* (Lanham MD: AltaMira, 2006), pp.268-70 & p.212 respectively.

the qualitative researcher frequently conducts research in a specific milieu (a case study) whose representativeness is unknown and probably unknowable, so that the generalizability of such findings is also unknown.⁶⁷

The purpose of this qualitative approach is identified by Seidman:

Because hypotheses are not being tested, the issue is not whether the researcher can generalise the finding of an interview study to a broader population. Instead the researcher's task is to present the experience of the people he or she interviews...so that those who read the study can connect to that experience, learn how it is constituted and deepen their understanding of the issues it reflects.⁶⁸

The approach taken with the interviews can be further characterised as phenomenological – that is, attempting to ‘describe and analyse the culture and behaviour of humans and their groups from the point of view of those being studied’ as Bryman puts it.⁶⁹ Further, it is a ‘multi-sited’ approach in the straightforward sense that my interviewees do not live in the same geographical location, but more profoundly, that there are differences and nuances in the views of each that reveal them as believing they live in different universes.⁷⁰ In the face of such a pluralistic and mutable field of study, an approach which does not attempt to model a representative population is appropriate and indeed inevitable.

1.5.5 Reflexivity

The professor of religious studies June O'Connor has encapsulated the role of reflexivity in studies such as this: ‘It's not enough to tell me what you see. I want to know where you are standing as you see and speak, and also why you stand there.’⁷¹

⁶⁷ Alan Bryman, *Quantity and Quality in Social Research* (London and New York: Routledge, 2001), p.100.

⁶⁸ Irving Seidman, *Interviewing as Qualitative Research : A Guide for Researchers in Education and the Social Sciences* (4th edn.) (New York NY: Teachers College Press, 2013), p.54.

⁶⁹ Alan Bryman, *Quantity and Quality*, p.46.

⁷⁰ ‘Multi-sited’ is used in this way by e.g. George E. Marcus, ‘Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography’ in *Annual Review of Anthropology*, Vol.24, 1995, p.95-117.

⁷¹ June O'Connor, ‘The Epistemological Significance of Feminist Research in Religion’ in Ursula King (ed.), *Religion and Gender* (Oxford: Blackwell, 1995) p. 48. This statement is discussed in relation to

The philosopher of anthropology and science Mark Risjord characterised reflexivity as ‘a response to the recognition that, in the social sciences, the researchers are subject to the very same social forces they are studying... The claim is that if the interpreter can (somehow) recognize and reflect on these background conditions of the research, the research will be more epistemologically robust.’⁷² The positive function of reflexivity as part of the interview process has been asserted in recent theses in which astrologers were interviewed by Campion, Bird and Brady.⁷³

The particular focus of this study renders reflexivity problematic in the same way as has been seen above with the idiographic/nomothetic distinction; it would be easy to take a position that would pre-empt elements of the discussion that this thesis aims to develop. The reason for this is that a reflexive approach acknowledges and establishes the relevance of subjective knowing; this emerged for instance when the professor of medical humanities and religious studies David J. Hufford suggested that the central point of reflexivity is that ‘all knowing is subjective’ and that ‘Acknowledging the subjectivity of knowledge grants that points of view, perspectives, are inevitably a part of knowing.’⁷⁴

To take this as an unquestioned tenet of this study would be premature, insofar as the relevance of subjective knowing is in itself a central point of contention. Thus for example Bricmont and Sokal, in discussing reflexivity, asserted:

it seems to us that if sociologists start trying to explain why they hold their own beliefs without taking into account the evidence that those beliefs are somehow better or more objective than those of their critics, then we simply move from error to absurdity.⁷⁵

reflexivity in: Gavin Flood, *Beyond Phenomenology: Rethinking the Study of Religion* (London: Cassell, 1999) p. 37.

⁷² Mark Risjord, *Philosophy of Social Science: a Contemporary Introduction* (New York: Routledge, 2014) p.62.

⁷³ Campion, *Prophecy, Cosmology*, pp. 9 – 10; Bird, *Astrology in Education*, pp. 22 – 24; Brady, *Theories of Fate*, pp. 37 – 39.

⁷⁴ David J. Hufford, ‘The Scholarly Voice and the Personal Voice: Reflexivity in Belief Studies’, *Western Folklore* Vol. 54, No. 1 (Jan 1995) pp. 57 – 8.

⁷⁵ Jean Bricmont and Alan Sokal, ‘Science and Sociology of Science: Beyond War and Peace’ in Jay A. Labinger and Harry Collins, *The One Culture? A Conversation about Science* (University of Chicago Press, 2001) p. 43 n.37.

And the professor of history John H. Zammito has suggested that ‘radical reflexivity’ tends towards ‘a fatal impasse’ for science studies: ‘Here we are not considering better accounts of science but a metatheoretical intervention that preempts empirical inquiry.’⁷⁶ An approach that either enshrined or dismissed reflexivity as a perspective within this study would be partial and therefore problematic. It would be problematic because it would not fully acknowledge the perspective of many of astrology’s critics and a small number of astrologers; the status of subjective knowledge is a central issue in discussions of astrology’s truth. Critics of astrology often do not contest the subjective experience of astrology *seeming* true; but they deny that this has any relevance to what they see as actual, objective, truth.

The issue faced by the study at this juncture is an extreme form of an issue that always shadows reflexivity. Hufford remarked that an initial recognition of the limits to knowledge implied by reflexivity can engender a reaction whereby a view is sought that would ‘transcend perspective’.⁷⁷ He remarked that such a view is what the philosopher Thomas Nagel called ‘the view from nowhere’.⁷⁸ For Nagel, the idea of a ‘view from nowhere’ is a way of characterising, and caricaturing, the idea of purely objective knowledge – knowledge, that is, which ‘includes and comprehends the fact that the world contains beings which possess it, explains why the world appears to them as it does prior to the formation of that conception, and explains how they can arrive at that conception itself.’⁷⁹ The idea of a ‘view from nowhere’ as a desideratum comes into focus in this study particularly because it exists largely at the interstice of two mutually exclusive positions, so that – as already discussed – any actual position I could take as researcher would be inimical to some degree, with only the idealised and unattainable ‘view from nowhere’ entirely satisfactory. The issues here can be elaborated, and clarified, by looking at them in terms of ‘insider-outsider’ issues.

⁷⁶ John H. Zammito, *A Nice Derangement of Epistemes: Post-positivism in the Study of Science from Quine to Latour* (University of Chicago Press, 2004) p. 251.

⁷⁷ Hufford, ‘Scholarly Voice’, p. 60.

⁷⁸ Hufford, ‘Scholarly Voice’, p. 60.

⁷⁹ Thomas Nagel, *The View from Nowhere* (Oxford: Oxford University Press, 1986) p. 70.

1.5.6 Insider-Outsider Issues

The professor of religious studies Russell T. McCutcheon has characterised the insider-outsider problem as ‘one of the most important issues confronting scholars who study human behavior, institutions, and belief systems.’⁸⁰ For McCutcheon the central issue is ‘whether, and to what extent, someone can study, understand, or explain the beliefs, words, or actions of another. In other words, to what degree, if any, are the motives and meanings of human behaviors and beliefs accessible to the researcher who may not necessarily share these beliefs and who does not necessarily participate in these practices?’⁸¹

One major aspect of ‘insider’ knowledge in the study of astrologers was discussed by Bird in introducing the approach she took in her ethnographic study of astrological education:

the initiation of my present project was predicated on my having that degree of familiarity with the astrological language, and experience of expressing myself in its terms to others of its speakers, which is the essential prerequisite for any researcher planning to embark upon an anthropological study of astrology and astrologers... My knowledge of the language of astrology was central to the design, development and execution of this research.’⁸²

What Bird described here is, I suggest, one level of insiderhood; in the passage quoted, she characterises the insider position as based on familiarity with astrological technique. Lindsay Radermacher, in her MPhil, characterised the insider position in a way that moves beyond familiarity with technique: ‘the deeper understanding and more subtle application of these [astrological] symbols requires a level of experience that can only be developed through practice, and over time.’⁸³ For Radermacher, astrological understanding arises only through engagement with astrology, so that one needs to be a practising insider before one is in a position to assess astrology’s truth-status. There is an

⁸⁰ Russell T. McCutcheon (ed.), *The Insider/Outsider Problem in the Study of Religion – A Reader* (London: Cassell, 1999) p. vii.

⁸¹ McCutcheon, *Insider/Outsider*, p.2.

⁸² Bird, *Astrology in Education*, p. 6.

⁸³ Radermacher, *Role of Dialogue*, p. 90.

echo here of the need for involvement in many religions and magical paths, a fact that Radermacher drew out when she wrote: ‘Our view is that gnosis – as spiritual knowledge or “knowing,” rather than rational knowledge or information – is closer to the practice of divinatory astrology.’⁸⁴ A parallel between astrological knowledge, thus characterised, and a level of experience accessed through magical ritual (‘the otherworld’) can be seen when the anthropologist Susan Greenwood argued: ‘Just as the current scientific method is largely based on a rationality grounded in a logic associated with linear causality, so the otherworld is governed by its own logic and must be studied in its proper context.’⁸⁵

In these cases, Radermacher and Greenwood in effect give astrology and magic respectively idiographic status, under the interpretation of ‘idiographic’ that affords it ontologically real status. Whilst they thus justified taking ‘insider’ approaches in their research, the orientation of the present study is necessarily more complex insofar as it comprises groups with contradictory views. Thus, to the extent that I was an ‘insider’ to the subset of commentators on astrology who consider the scientific perspective on astrology’s truth-status to be definitive, I would necessarily be an outsider to the subset who subscribe to Radermacher’s position. It is logically impossible to be a true or complete insider to all the positions under consideration, and this necessitates a careful approach to the treatment of insider-outsider issues in this thesis.

1.5.6.1 Approach to Insider-Outsider Issues in this thesis

The anthropologist Clifford Geertz (1926 – 2006) argued that it was not necessary to be entirely an insider in order to pursue ethnographic study: ‘Understanding the form and pressure of... natives’ inner lives is more like grasping a proverb, catching an allusion, seeing a joke – or... reading a poem – than it is like achieving communion.’⁸⁶ This is the orientation I have taken to the ethnographic component of this study. I believe the case for doing so is strong, for four reasons. First, both groups of ‘natives’ – that is to say, astrologers and their critics – are predominantly Western, so that the differences between them arise from individual orientations within the same cultural milieu, rather

⁸⁴ Radermacher, *Role of Dialogue*, p. 90.

⁸⁵ Susan Greenwood, *Magic, Witchcraft and the Otherworld* (Oxford: Berg, 2000) p.24 (p.23 for her characterisation of the ‘otherworld’).

⁸⁶ Clifford Geertz, “‘From the Native’s Point of View’: On the Nature of Anthropological Understanding”, *Bulletin of the American Academy of Arts and Sciences*, Vol. 28 No. 1 (Oct. 1974) p.45.

than being rooted in culturally-based positions that might remain opaque to the outside observer. Second, this thesis's focus on issues of truth tends to lift the issues out of the sanctum of inner belief, into a theatre of publically avowable and demonstrable reasoning - though it must be acknowledged that much stress is placed on the word 'tends' in that sentence. Third, given the impossibility that any individual could be a complete insider to both the groups involved simultaneously, this is the only basis upon which such a study could be conducted at all. Fourth, there is precedent in anthropological literature for seeing motility between insider and outsider positions as a positive asset. I will develop that point now.

The sociologists Elizabeth McNess, Lore Arthur and Michael Crossley have commented on the notional nature of the insider-outsider distinction, remarking on the need 'to recognise that neither the researcher, nor the subjects of analysis are fixed, stable and coherent but constantly shifting, incomplete, fragmented and contradictory in relation to both collective and personal existence'⁸⁷ The lecturer in social work Caroline Humphrey has argued that 'an acknowledgement of the insider-outsider hyphen is indispensable to researcher reflexivity when operating in complex territories.'⁸⁸ Following a precedent set by the professor of psychology Michelle Fine, Humphrey took the hyphen to represent potential relationship and change.⁸⁹ In her work she found that 'The perpetual crossing-over between life-worlds gave birth to a complex narrative which surpassed anything that I could have produced had I been simply an insider *or* an outsider.'⁹⁰

Although she did not cite Nagel, Humphrey's discussion of the insider-outsider hyphen comes close to Nagel's suggestion for the best way to proceed in cases where the standpoints of subjectivity and objectivity cannot be satisfactorily integrated:

⁸⁷ Elizabeth McNess, Lore Arthur and Michael Crossley, "'Ethnographic Dazzle" and the construction of the "Other": revisiting dimensions of insider and outsider research for international and comparative education' in *Compare: A Journal of Comparative and International Education* Vol. 45 No. 2 p. 299.

⁸⁸ Caroline Humphrey, 'Insider-Outsider: Activating the Hyphen', *Action Research* Vol. 5 (1) 2007, p. 22.

⁸⁹ At p. 12 of her paper, Humphrey cites: Michelle Fine, 'Working the Hyphens: Reinventing Self and Other in Qualitative Research' in N. K. Denzin and Y. S. Lincoln (eds.) *Handbook of Qualitative Research* (1st edn.) (Thousand Oaks, CA: Sage, 1994) pp. 70 – 82.

⁹⁰ Humphrey, 'Insider-Outsider', p. 15.

I believe the correct course is not to assign victory to either standpoint but to hold the opposition clearly in one's mind without suppressing either element. Apart from the chance that this kind of tension will generate something new, it is best to be aware of the ways in which life and thought are split, if that is how things are.⁹¹

This raises the question whether I am equipped to take such an approach. In order to pursue that, I will first say a little about my relationship to the material under discussion.

1.6 My Relationship to the Material

I learned to calculate and interpret astrological charts in the 1970's and have been involved in studying and using astrology since then. I have attended numerous astrological conferences and seminars and have spoken at a number of them, as well as having numerous articles and interviews published in various astrological journals and websites in the UK, Europe and the USA. This enables me to talk to astrologers as an 'insider', in a similar way to Bird's description of her own situation. I will now note a caveat to that.

My involvement with astrology was interrupted in 1986 when I became a Buddhist monk. From then until 1993, when I left the order, I had no contact with the astrological community, and did not practise or read anything about astrology. On emerging from the monastery and acquainting myself with developments in the astrological community I was struck by several things. In the years before my ordination there had been considerable optimism amongst many astrologers that the truth of astrology was going to be established under a scientific frame of reference. This was based primarily on two developments:

First, the statistical analysis of horoscopes by Michel and Françoise Gauquelin seemed to be showing a scientific basis for astrology (this will be discussed in chapter 4 of this thesis). Second, the astrologer John Addey (1920 – 1982), who characterised the Gauquelin work as 'mighty blows for the vindication and reconstruction of Astrology'

⁹¹ Nagel, *View from Nowhere*, p. 6.

had developed the use of ‘harmonics’ in astrology - an approach which promised, through analysis based in number, to ‘illuminate the whole field of astrology, straightening out misconceptions, making good deficiencies and shedding new light on problems which had long perplexed us.’⁹² Addey’s work was being developed by the astrologer David Hamblin; I was in a small astrology group with Hamblin in 1985 – 6 and took a particular interest in harmonics.

When, after leaving the monastery, I began reacquainting myself with the world of astrology I was met with a most discouraging scene. Michel Gauquelin had committed suicide in 1991, and there were rumours that this coincided with flaws in his approach being discovered. These flaws eventually turned out to be minor and not to affect the validity of Gauquelin’s work.⁹³ It took years for the full story to emerge however, and the impact of the human tragedy was emphasised by the expectation that I had had in 1986, that Gauquelin’s findings would quickly lead to more scientifically-based evidence for astrology’s truth. Not only had no further evidence been found, but the status of what had seemed so promising was now in doubt. Indeed, the existence of *any* scientific basis for astrology was in doubt. In addition to this, I found that David Hamblin had lost confidence in astrology. He explained his position in a letter published in 1990:

If astrology was true in the way that astrologers claim that it is true, then the simplest and most unsophisticated piece of research would be able to demonstrate a correlation between (for instance) Ascendant sign and personality traits. Since these correlations have not been demonstrated, it is plain that astrology does not work in the way that most astrologers say that it works, even if it may possibly work in some other way. Hence, for the time being, I have given up astrology.⁹⁴

My expectation had been that, in the years I had been away from astrology, more evidence would have been gathered for its basis in science. This had not happened, and

⁹² John Addey, ‘Michel Gauquelin strikes again (Part 1)’, *The Astrological Journal* Vol. XVI No. 3 (Autumn 1974), p. 2; John Addey, *Harmonics in Astrology: An introductory text-book to the new understanding of an old science* (Romford: L. N. Fowler, 1976) p. 11.

⁹³ For a concise summary with references to the full range of relevant sources: Nick Kollerstrom, ‘How Ertel Rescued the Gauquelin Effect’ and Suitbert Ertel, ‘Comment from Suitbert Ertel’ in *Correlation* Vol. 23 No. 1 (2005), pp.34 – 43 and pp. 43 – 44 respectively.

⁹⁴ David Hamblin, ‘Astrology as Religion’ (Letter), *Astrological Journal* Vol. 32 No. 6; November/December 1990, p. 406.

instead there was a cloud over the Gauquelin work and harmonics, which had seemed so promising. None of the astrologers I spoke to seemed to be much concerned by this situation, and perhaps – if I had been involved continuously in the astrological community – it would not have struck me as such a problem either. As it was, however, I felt somewhat like an outsider, grappling with the fundamental improbability of astrology as a source of truth and the apparent obliviousness of its practitioners to this situation. The contrast between the extremely monological belief-structure in the monastery and the heteroglossia of the astrological community probably served to heighten the cognitive dissonance I experienced.

Hence my interest in examining the truth-status of astrology. To this end, in 1996 I began working on *Astrology in the Year Zero*, which was published in 2000.⁹⁵ This is largely comprised of interviews with astrologers and critics of astrology, aimed at articulating what the practice of Western astrologers consists of, and what pathways of thought there were for thinking about the truth-status of astrological work. The book has been on the reading lists of several universities and has been quoted in many subsequent discussions of astrology including nine of the recent PhD theses, and the MPhil dissertation, cited above.

My attempt to evaluate and present arguments for and against the truth of astrology resulted in both astrologers and critics of astrology looking at me askance. For instance the astrologer Dennis Elwell remarked, apropos of the involvement of Geoffrey Dean and his associates in my book, ‘It was as if we (i.e. astrologers) were invited to a convivial meal, only to find Hannibal Lecter among the guests.’⁹⁶ I suggested that we discuss the reasons for our different perspectives, and those discussions turned into an article.⁹⁷ In addition, I offered to curate a dialogue between Elwell on one side and Dean et al on the other. This resulted in a series of eight articles, amounting to more than 130,000 words in total, with an additional article from Suitbert Ertel (1932 – 2017)

⁹⁵ Phillipson, *Astrology Year Zero*.

⁹⁶ Garry Phillipson and Dennis Elwell, ‘Self-Defence for Astrologers’ *The Astrological Journal*, Vol.43 No.5, Sept/Oct 2001, p.14. This article is a discussion that ensued between Elwell and me regarding how criticisms of astrology should be approached. I subsequently curated a long discussion between Elwell and Dean et al., and hosted it on my website: <http://www.astrozero.co.uk/astroscience/elres.htm> (checked 27th August 2014).

⁹⁷ Namely Phillipson and Elwell, ‘Self-Defence’.

that focussed on Elwell's discussion of Gauquelin's work.⁹⁸ Although it raised many interesting issues, the exchanges between Elwell and Dean et al also embody a failure of dialogue between advocates and critics of astrology. Thus for example towards the end of his final article, Elwell wrote: 'From my side, I believe [the discussion] has been worth while. Some issues have emerged better defined, yet the gulf between "science" and astrology seems as unbridgeable as ever.'⁹⁹ The concluding words from Dean et al, at the end of their final article in the series, was: 'his four articles reduce to bluster 1, utility 0. A pity he did not terminate this waste of time earlier.'¹⁰⁰

On the basis of this background I believe I am well-equipped, both by orientation and by experience, to work in the middle ground between astrologers and their critics. Not that any of this could absolve me from the need to critically evaluate my own perspectives as I pursue the research. One particular intellectual discipline I have taken on, which also forms a major structural element of this thesis, is to use the three major theories of truth from Western epistemology to analyse and contextualise the variety of ways in which astrology's truth is discussed.

1.7 Approach to Truth

The need for a philosophical approach to astrology's truth-status was argued for by the philosopher Bernulf Kanitscheider (1939 – 2017): 'although those trained in science may have good grounds for rejecting astrology, it would be wrong for that reason alone to hold it to be fallacious. The evaluation of astrology must be pursued through logical and epistemological analysis, irrespective of its social acceptance or rejection.'¹⁰¹

⁹⁸ Dean's co-contributors were: Ivan Kelly, Arthur Mather and Rudolf Smit. All articles were originally posted in 2001 and are indexed at: <http://www.astrozero.co.uk/astroscience/elres.htm> (accessed 15th August 2019). They are detailed individually in the bibliography of this thesis, under the names of the contributors.

⁹⁹ Dennis Elwell, 'Memo to the Careful Ones' (2001), http://www.astrozero.co.uk/astroscience/elwell_4.htm (checked 15th August 2019).

¹⁰⁰ Geoffrey Dean, Ivan Kelly, Arthur Mather and Rudolf Smit, 'A Reply to Dennis Elwell's "Memo to the Careful Ones"' (2001), http://www.astrozero.co.uk/astroscience/researchers_respond_4_1.htm (checked 15th August 2019).

¹⁰¹ Bernulf Kanitscheider, 'A Philosopher looks at Astrology', *Interdisciplinary Science Reviews* (1991), Vol. 16 No. 3, p. 260.

In what follows, questions about the truth of astrology will be taken to be questions as to whether the use of astrology results in true statements to such an extent that astrology itself has a viable claim to be characterised ‘true’. The relationship between ‘truth’ and ‘knowledge’ will be examined in detail in chapter 3. Until then it can be said that the two terms overlap very substantially: if a proposition is true it conveys knowledge; and knowledge is knowledge only to the extent that what is known is true.

Contemporary philosophers frequently remark that ‘truth’ is difficult to define. For instance, truth is characterised as ‘an enigmatic creature’; ‘notoriously elusive’; and as leading to ‘endless paradoxes’.¹⁰² The first significant attempt to define it is often taken to have been made by Aristotle: ‘To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, and of what is not that it is not, is true.’¹⁰³ This, in turn, can be traced back to Plato: ‘the true [statement] says those that are, as they are [...] And the false [statement] says things different from those that are.’¹⁰⁴ Since the time of Plato and Aristotle, the inherent difficulties in applying these definitions have resulted in the evolution of three major theories of truth. These theories, together with reasons to characterise them as ‘major’ and some other theories, will be discussed further in chapter 3, but since they are a major structural element of the thesis it will be useful to introduce them now.

1.7.1 Three Theories of Truth

The three theories of truth are: the correspondence theory; the coherence theory; and the pragmatic theory of truth. In philosophical texts these are often referred to collectively in such terms as ‘three major theories of truth’, ‘three traditional theories of truth’ and

¹⁰² Linda Martin Alcoff in: Linda Martin Alcoff (ed.), *Epistemology: The Big Questions* (Oxford: Blackwell, 1998) p.309; Paul Horwich, ‘Theories of Truth’ in: Jonathan Dancy, Ernest Sosa, Matthias Steup (eds.), *A Companion to Epistemology* (2nd edn.) (Oxford: Blackwell, 2010 [1992]) p. 772; E. J. Lowe, ‘Truth’ in Ted Honderich (ed.), *The Oxford Companion to Philosophy* (Oxford University Press, 1995) p. 882.

¹⁰³ Aristotle, W. D. Ross (tr.), *Metaphysics* in: Aristotle, Jonathan Barnes (ed.), *The Complete Works of Aristotle: The Revised Oxford Translation, One Volume Digital Edition* (Princeton, NJ: Princeton University Press, 1995 [1984]), pp. 3437 (IV.7, 1011b 24-8). The passage is cited at e.g. Lawrence E. Johnson, *Focusing on Truth* (London: Routledge, 1992) p.6.

¹⁰⁴ Plato, *Sophist* 263b (statement made by the ‘Visitor’ to Theaetetus). This translation: Nicholas P. White, in John M. Cooper (ed.), *Plato: Complete Works* (Indianapolis, IN Hackett, 1987) p.287. This is cited, and its similarity to Aristotle’s formulation noted, by e.g. Marian David, ‘Theories of Truth’ in Ilkka Niiniluoto, Matti Sintonen, Jan Woleński (eds.) *Handbook of Epistemology* (Dordrecht: Kluwer, 2004) p. 337.

‘three main views of truth’.¹⁰⁵ Very brief outlines of the three theories follow; more background will be provided in chapter 3, and then the theories will be applied to astrology’s truth-status in chapters 4 to 7.

The correspondence theory of truth is generally traced back to the descriptions of truth by Plato and Aristotle, cited in the previous section.¹⁰⁶ A more recent advocate of this theory, Bertrand Russell, characterised it when he argued that ‘truth consists in some form of correspondence between belief and fact.’¹⁰⁷

The coherence theory of truth is associated particularly with Spinoza, Kant, Fichte and Hegel; its essence consists in the assertion that ‘for a proposition to be true is for it to cohere with a certain system of beliefs.’¹⁰⁸

The most recent of the three theories is the pragmatic theory of truth, generally credited to Charles S. Peirce, William James and John Dewey. Under this theory, as James put it, ‘“*The true,*” to put it very briefly, is only the expedient in the way of our thinking, just as “*the right*” is only the expedient in the way of our behaving.’¹⁰⁹

At points throughout this thesis I will show that the principles behind the three theories of truth are each used regularly when astrology’s truth is discussed. In order to accomplish this it will generally be necessary to extrapolate from the arguments as presented, to show that the argument rests on (for instance) coherence with science, and therefore the coherence theory of truth. Such extrapolation is necessary because, to the best of my knowledge, the theories are not directly discussed – by name, in their

¹⁰⁵ Reuben Abel, *Man is the Measure – A Cordial Invitation to the Central Problems of Philosophy* (New York: Free Press/Macmillan, 1976), p.74; Brian Carr, ‘Truth’ in G.H.R. Parkinson (ed.), *An Encyclopedia of Philosophy* (London: Routledge, 1988) p.89; Ian G. Barbour, *Religion in an Age of Science – The Gifford Lectures 1989 – 1991 Volume 1* (London: SCM Press, 1990) p.34; pp.34-5 for his description of the three theories. Original emphasis.

¹⁰⁶ For instance: George Englebretsen, *Bare Facts and Naked Truths: A New Correspondence Theory of Truth* (Aldershot: Ashgate, 2006) pp. 10 – 11.

¹⁰⁷ Russell, Bertrand, *The Problems of Philosophy* (Oxford University Press, 1959 [1912]) p. 70.

¹⁰⁸ Ralph C. S. Walker, *The Coherence Theory of Truth: Realism, anti-realism, idealism* (London: Routledge, 1989) pp. 41 – 101 for the role of Spinoza et al; p. 2.

¹⁰⁹ James, William, *Pragmatism: A New Name for Some Old Ways of Thinking* in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1907]) p.583. Original emphases.

philosophical context – by any commentator with the exception of Brockbank, who discussed them briefly.¹¹⁰

1.8 William James

William James has already been referred to a number of times in this chapter, and his thought will play a major role in the entire thesis, particularly in chapters 6 and 7. The focus on James's thought follows from precedent and principle. Taking precedent first, the emphasis on James has grown to a significant degree from Patrick Curry's references to James's thought in relation to divinatory astrology. Although Curry has never given a detailed exposition of James's thought, his writing on astrology has returned repeatedly to James. The relevance of James stems from his advocacy, particularly in *The Varieties of Religious Experience*, of the qualitative study of consciousness.¹¹¹ Curry characterised James's approach here as fundamentally opposed to the attempt, widespread in 20th century psychological thought and particularly embodied in Behaviourism, to reduce mind to mechanism – an issue that will be considered in chapter 5.¹¹² In contradistinction, Curry lauded James's emphasis on consciousness as key to any attempt fully to comprehend the universe and our place in it.¹¹³ Further, he cited James's assertion that such an enquiry inevitably shades into the religious; James's religious philosophy will be explored in chapter 6.¹¹⁴

The potential for truth within subjective experience is key here, for if that is given then it would follow that there could be no single conceptual framework that would encompass all possible truth. The case for pluralism in epistemology of the kind advocated by James would then be strong. This is a recurrent theme in Curry's work.¹¹⁵ James's philosophy of pragmatism will receive an extensive treatment in this thesis. Although pragmatism has not been much discussed by Curry in its own right, it is clear

¹¹⁰ Brockbank thesis. The three theories are referred to at pp. 209 – 10.

¹¹¹ Curry in Willis and Curry, *Astrology Science Culture*, p. 139, p. 150.

¹¹² Curry in Willis and Curry, *Astrology Science Culture*, p. 139

¹¹³ Curry in Willis and Curry, *Astrology Science Culture*, p. 110.

¹¹⁴ Curry in Willis and Curry, *Astrology Science Culture*, p. 110.

¹¹⁵ Curry in Willis and Curry, *Astrology Science Culture*, p. 69, p. 79, p. 117.

from his occasional references to it that he sees pragmatism as intimately linked to pluralism, and therefore the relevance of pragmatism is implicit in much of his work.¹¹⁶

Pragmatic thought has been discussed in relation to astrology in three recent theses, albeit briefly in each case. Thus Alie Bird argued that ‘astrological knowledge is subjective, partial and pragmatic, despite the fact that it masquerades as technical know-how...’¹¹⁷ In similar vein, Kirstine Munk wrote: ‘I suppose that one reason why people hesitate in voicing complaints about astrology has to do with the nature of “truth” in divination: “Truth” in divination is pragmatic. It is something that, in the words of William James, happens to an idea.’¹¹⁸ Brockbank also considered James’s account of pragmatic truth very briefly.¹¹⁹ His conclusion was that it was incompatible with his definition of ‘astrological truth, which is true prior to the events.’¹²⁰ I will discuss Brockbank’s treatment of astrological truth in chapter 3.

The fact that James was a co-founder and major protagonist of the pragmatic theory of truth would suffice to guarantee his thought a significant role in this thesis; his religious thought – particularly the pantheistic and panpsychic elements therein – might also have been expected to play a part. The confluence in his thought of these two elements accentuates the case for considering his thought.

My discussion of James as a philosopher with much to contribute to contemporary discussion goes somewhat against academic fashion. That fashion was remarked by the professor of history James Livingston when he asked: ‘Why do we foreground Heidegger and bracket James, as, for example, Anthony Giddens does in a chronologically perverse passage: “William James echoes aspects of Heidegger’s

¹¹⁶ Curry in Willis and Curry, *Astrology Science Culture*, p. 117; Patrick Curry, *Ecological Ethics: An Introduction* (Cambridge: Polity Press, 2011) p. 155.

¹¹⁷ Bird, *Astrology in Education*, p.255.

¹¹⁸ Munk, *Signs of the Times*, p.292. James wrote, ‘The truth of an idea is not a stagnant property inherent in it. Truth happens to an idea’ in: William James, *Pragmatism: A New Name for Some Old Ways of Thinking* in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1907]), p. 574.

¹¹⁹ Brockbank, *Responsive Cosmos*, p. 209.

¹²⁰ Brockbank, *Responsive Cosmos*, p. 209 n. 78.

view...”¹²¹ In choosing to focus on James I follow the professor of philosophy Charlene Haddock Seigfried’s assertion that James, along with Nietzsche and Marx, ‘helped inaugurate – long before Martin Heidegger – the end of philosophy as traditionally understood.’¹²² Although this is with the caveat, which Seigfried went on to add, that what is really discussed here is a ‘new configuration’ of philosophy rather than an end; James’s insistence that ‘The centre of gravity of philosophy must... alter its place.’¹²³

James’s actual knowledge of, and sympathy for, astrology seem both to have been slight. To the best of my knowledge the subject crops up only twice in his correspondence and writings. The first instance is in a letter from Edmund Gurney to James. In discussing Richard Hodgson (a researcher for the American Society for Psychical Research), Gurney wrote to James: ‘he combines the powers of a first-rate detective with a perfect readiness to believe in astrology. (Dont quote this, as it might be misunderstood. I should pity the astrologER whose horoscopes he took to tackling.)’¹²⁴ James’s reply, unfortunately, seems not to have survived and is not included in the volumes of his correspondence. It is clear however that in the psychical research circles in which he sometimes moved, astrology was regarded as a possible – though unpromising – matter for research and enquiry. The second reference to astrology I was able to find in James’s writings is his dismissive suggestion that, before the advent of science, ‘...alchemy, magic, astrology, imposed on every one’s belief...’¹²⁵

James’s apparent lack of interest in or sympathy for astrology notwithstanding, I will – particularly in chapters 6 and 7 of this thesis – argue that his philosophy provides a context within which astrology-as-divination can be accommodated. The quotation from Gurney’s letter in the previous paragraph introduced James’s involvement with

¹²¹ James Livingston, ‘Pragmatism, Nihilism, and Democracy: What is Called Thinking at the End of Modernity?’ in John J. Stuhr (ed.), *100 Years of Pragmatism: William James’s Revolutionary Philosophy* (Bloomington: Indiana University Press, 2010) p. 155.

¹²² Charlene Haddock Seigfried, *William James’s Radical Reconstruction of Philosophy* (State University of New York, 1990), p.21.

¹²³ Seigfried, *James’s Radical Reconstruction*, p. 21; James, *Pragmatism*, p. 57.

¹²⁴ Edmund Gurney, letter to William James 16th January 1887 in: Ignas K. Skrupskelis and Elizabeth M. Berkeley (eds.), *The Correspondence of William James: Volume 6, 1885 – 1889* (Charlottesville, VA: University Press of Virginia, 1998) p. 192. Sic throughout.

¹²⁵ William James, *Some Problems of Philosophy: A Beginning of an Introduction to Philosophy* in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1911]) p.993.

psychic research, and the extent of this – and its relevance to my discussion – requires comment. One of James’s earliest published writings was a review of a book on spiritualism.¹²⁶ He was a founder-member of the American Society for Psychical Research in 1884, and continued to investigate such phenomena until his final days.¹²⁷ The definition of ‘psychic’ and its cognates, and their relevance to astrology, will be discussed in chapter 6 of this thesis. At this introductory stage in my discussion, the relevance of James’s involvement with psychic research is perhaps best characterised as an engagement on his part with a quandary similar to the one identified in section 1.3 above, where it seems impossible to reconcile personal, apparently significant, experience with the need for intersubjective proof. This is encapsulated in one of James’s letters. After describing his attendance at a séance, and discovery of fraud on the part of the medium, he wrote: ‘If I go on investigating I should make anyhow an important discovery; either that there exists a force of some sort not dreamed of in our philosophy... or, that human testimony, voluminous in quantity, and from the most respectable sources, is but a revelation of universal imbecility.’¹²⁸

1.9 Structure of this Thesis

Following this first, introductory, chapter the remaining chapters will be as follows:

Chapter 2 is a literature review of sources I have drawn on in this thesis that deal in one way or another with astrology and issues related to its truth. This will include recent PhD theses on contemporary astrology and the interviews recorded for this thesis.

¹²⁶ William James, ‘Sargent’s “Planchette”’ in: William James, Ralph Barton Perry (ed.), *Collected Essays and Reviews by William James* (London: Longmans, Green & Co., 1920) pp. 1 – 2. Article originally published in the *Boston Daily Advertiser*, 10th March 1869.

¹²⁷ James’s involvement in the ASPR: Robert D. Richardson, *William James: In the Maelstrom of American Modernism – A Biography* (Boston: Houghton Mifflin, 2006) p. 259. His evaluation of his investigations, written in the year before his death: William James, ‘The Confidences of a “Psychical Researcher”’ in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1909]) pp. 1250 - 1265. This facet of James’s life and work is discussed in: Krister Dylan Knapp, *William James: Psychical Research and the Challenge of Modernity* (Chapel Hill, NC: University of North Carolina Press, 2017).

¹²⁸ William James, letter to Catherine Havens 14th June 1874 in: William James; Ignas K. Skrupskelis and Elizabeth M. Berkeley (eds.), *The Correspondence of William James: Volume 4, 1856 – 1877* (Charlottesville, VA: University Press of Virginia, 1995) p. 496.

Chapter 3 is a literature review which deals with the philosophical sources upon which this thesis draws. It considers the historical development of the three theories of truth, the relevance to this thesis of some other theories, and precedents for applying the three theories of truth to an examination of the truth of a particular practice. It will also further introduce William James as a figure of relevance for this discussion.

The next four chapters apply the three theories of truth to astrology. The structure of these chapters is as follows:

Chapter 4 – the correspondence theory of truth. This chapter examines the ways in which correspondences between astrological statements and ‘facts’ have been expected to work, some of the tests that have been conducted on this basis, and their results. It then considers the ongoing quest for a satisfactory definition of ‘fact’ in this context.

Chapter 5 – the coherence theory of truth, part 1. This focuses on the consequences for astrology if science is taken as the existing body of knowledge with which astrology would need to cohere if it were to be judged true.

Chapter 6 – the coherence theory of truth, part 2. This chapter deals with issues arising if divination is taken as the existing body of knowledge with which astrology would need to cohere if it were to be judged true. William James’s philosophy of religion plays a central role here.

Chapter 7 – the pragmatic theory of truth. This chapter examines the relationship between the experience that astrology seems to work, and the judgement that astrology is true. In particular, and in the context established by the previous chapter, it considers how astrology-as-divination might be expected to work.

Chapter 8 – conclusion. This chapter reviews the issues arising from applying each theory of truth to astrology, considers the relationship between the three theories, and whether this relationship in itself has any consequence for astrology.

Chapter 2: Literature Review – Astrology and Truth

2.1 Introduction

This chapter is a literature review of texts that discuss astrology's relationship to truth. Its aim is to outline the current state of the discussion that will be explored in this thesis, and in order to do this I will focus on a relatively small number of influential texts. The two characterisations of astrology – 'astrology-as-science' and 'astrology-as-divination', briefly introduced in the preceding chapter – will be discussed and contextualised. The next section below (2.2) will introduce the distinction between these two understandings of astrology as it is found in several sources. The following two sections (2.3, 2.4) will elaborate upon the way in which each position has been presented by its protagonists. It will then be possible, in section 2.5, to focus on the nature of the disagreements regarding the characterisation and status of the two positions. The chapter conclusion, section 2.6, will review and distil the key concepts that have emerged.

As a literature review, the ambition of this chapter is limited. There is an element of literature review to this entire thesis because in order to illustrate the relevance of epistemology to astrology, it will be necessary to quote from and refer to both disciplines throughout. What follows in the two literature review chapters formally identified as such (chapters 2 and 3), therefore, aims only to provide a grounding in the basic conceptual framework, upon which the rest of the thesis can build.

2.2 Two Kinds of Astrology – Introduction, Context

The truth-status of astrology is bound up in the distinction between astrology-as-science and astrology-as-divination, insofar as each is a way in which astrology would function, which has consequences for the way in which its truth or falsity would be decided. The beginnings of this distinction can be seen in Hellenistic astrology, an approach which developed in the Mediterranean countries from the 2nd century BCE to the 6th century CE, and particularly in the *Tetrabiblos* of Claudius Ptolemy. The professor of Latin Mark Riley argued that 'Ptolemy is unique in his attempt to establish a scientific

foundation for astrology'.¹ The movement towards science was a move away from another form, and the historian of science Otto Neugebauer (1899 – 1990) alluded to both:

To Greek philosophers and astronomers, the universe was a well defined structure of directly related bodies. The concept of predictable influence between these bodies is in principle not at all different from any modern mechanistic theory. And it stands in sharpest contrast to the ideas of either arbitrary rulership of deities or of the possibility of influencing events by magical operations. Compared with the background of religion, magic and mysticism, the fundamental doctrines of astrology are pure science.²

This basis in science notwithstanding, it was Neugebauer's view that 'the boundaries between rational science and loose speculation were rapidly obliterated and astrological lore did not stem – but rather promoted – superstition and mysticism.'³ The chronology here is open to debate; commenting on Neugebauer, Riley suggested that 'the "loose speculation" came first and that the "rational science" was Ptolemy's contribution.'⁴ Riley argued that Ptolemy's approach was scientific because it worked from 'basic concepts' to 'the details of that system', defining the characteristics of the horoscopic factors and 'then showing how these characteristics can be used to forecast the weather, human nature in various climes, and some eclipse effects.'⁵ Ptolemy's approach could thus fit Popper's definition of science, cited in the previous chapter, insofar as it involves the establishment of rules and principles which could be intersubjectively tested. A necessary part of this perspective was Ptolemy's understanding of astrology as causally-based. This is seen, for instance, in his characterisation of astrological influences being similar in kind to the Sun's radiation of heat, so that 'most events of a general nature draw their *causes* from the enveloping heavens'.⁶

The astrological paradigm of Ptolemy has been cited by Geoffrey Cornelius to characterise astrology-as-science. Thus in the first text in which Cornelius explicitly

¹ Mark Riley, 'Science and Tradition in the Tetrabiblos', *Proceedings of the American Philosophical Society*, Vol. 132, No. 1 (1988) p. 67.

² Otto Neugebauer, *The Exact Sciences in Antiquity* (Princeton University Press, 1952) p. 164.

³ Neugebauer, *Exact Sciences*, p. 164.

⁴ Riley, 'Science and Tradition', p. 67 n.2.

⁵ Riley, 'Science and Tradition', pp. 67 – 8.

⁶ Ptolemy, F. E. Robbins (ed., tr.), *Tetrabiblos* (Cambridge, MA: Harvard University Press, 1940) p. 5. (I.1). Emphasis added.

argued that astrology should be considered a form of divination, he characterised this model in contradistinction to the causal model of astrology advocated by Ptolemy.⁷ Cornelius argued that Ptolemy epitomised a view of astrology which was in fundamental opposition to the subject's essential, divinatory, nature and which was an early version of scientific astrology: 'Early on astrology disguised its divinatory foundation. By the time of Ptolemy's "Tetrabiblos"... it could lay claim to being the rational science of the physical influences of the stars upon the Earth.'⁸

The essence of astrology-as-science thus involves the existence of causal influences from horoscopic factors which have, through observation, been codified as laws. The nature of astrology-as-divination is more complicated to explain. Cornelius suggested that it could be illuminated by considering horary astrology – a branch of astrology in which questions are answered by analysis of a chart drawn for the moment a question is presented to an astrologer. An example used by Cornelius is a chart cast by the astrologer William Lilly (1602 – 81) to ascertain the whereabouts of some fish and onions which had been stolen from a warehouse after he bought them.⁹ According to Lilly's description, his analysis of the chart revealed the appearance, profession and type of domicile of the fish-thief, whom he was therefore able to catch red-handed.

It would be difficult indeed to fit this example of astrological interpretation into Ptolemy's causal framework, not least because the astrological chart that described what happened came *after* the events themselves. If astrology operated through the influence of causal planetary rays, those rays would need to work retroactively in such cases. Remarking on such problems, Cornelius suggested that the existence of horary astrology 'throws the Ptolemaic model into disarray', adding the inference that this would explain why 'Ptolemy... does not allow horary, or anything like it, into the *Tetrabiblos*.'¹⁰ An advocate of an alternative explanation was Plotinus (204/5 – 270 CE) who argued: 'If the stars are held to be causing principles... then the birds and all the other things which the soothsayer observes for divination must equally be taken as

⁷ Geoffrey Cornelius, *Astrology and Divination (the Oslo Paper)* (1982), included in: www.cosmocritic.com/pdfs/Cornelius_Geoffrey_Oslo_and_Moment.pdf (accessed 16th August 2019).

⁸ Cornelius, *Astrology and Divination*, p.1.

⁹ William Lilly, *Christian Astrology* (facsimile edition) (London: Regulus, 1985 [1647]) p. 397-9; discussed in Cornelius, *Moment of Astrology*, pp. 98 – 100.

¹⁰ Cornelius, *Moment of Astrology*, p. 102; p. 103.

causing what they indicate.’¹¹ This both cast doubt on the relevance of causality, and implied that astrology might be similar to divination. It is possible that Plotinus wrote this as a direct critique of Ptolemy’s causal account of astrology in the *Tetrabiblos*.¹² Even if it was not aimed specifically at Ptolemy, it is clearly aimed at the approach he espoused.

Cornelius has drawn particularly on the thought of the philosopher and astrologer Marsilio Ficino (1433 – 1499) in characterising astrology-as-divination, whilst acknowledging that Ficino was ‘following in the footsteps of Plotinus’.¹³ As the scholar of esotericism and religion Angela Voss wrote, ‘Plotinus’ analysis of astrological effect is a clear refutation of causal thinking. Here, Ficino found confirmation of astrology as divination.’¹⁴ Ficino adopted Plotinus’s analogy of birds to illustrate the case for an astrology of signs: ‘many things are indeed indicated by the heavens yet are not caused by them... Such things, however, are often foretold through heavenly phenomena as signs, but not as causes; just as in auguries and auspices many things are considered to be portended through birds which are, however, in no way caused by the birds.’¹⁵

The conflicting accounts of astrology from Ptolemy on one hand, and Plotinus and Ficino on the other, are reiterated in Cornelius’s characterisations of astrology-as-science and astrology-as-divination, thus: ‘an astrology of *causes*, objective, universal, regular and astrologer-independent, and an astrology of *signs*, which is participatory, context-specific and irregular.’¹⁶ The description of astrology as divination categorises it as the same type of study as (in Cornelius’s words), ‘such diverse techniques as extispicy (entrails-divination), augury, omen-reading, *sortes* (the casting of lots)... reading tea-leaves, and laying out Tarot cards.’¹⁷ Such a perspective is shared by Darby Costello, an astrologer who spent time in South Africa with *sangomas* (diviners or

¹¹ Plotinus, Stephen MacKenna (tr.), *The Enneads: A new, definitive edition* (New York: Larson/Paul Brunton Philosophic Foundation, 1992) p. 177, III.I.5.

¹² James Wilberding, *Plotinus’ Cosmology: A Study of Ennead II.1 (40): Text, Translation and Commentary* (Oxford University Press, 2006) p. 5 n. 26.

¹³ Cornelius, *Moment of Astrology*, p. 8.

¹⁴ Angela Voss, ‘The Astrology of Marsilio Ficino: Divination or Science?’, *Culture and Cosmos*: Vol. 4 No. 2 (Autumn/Winter 2000), p. 36.

¹⁵ Marsilio Ficino, tr. Members of the Language Department of the School of Economic Science, London, *The Letters of Marsilio Vol. 6* (London: Shephard-Walwyn, 1999) p. 27 (Letter 17); cited in part by Cornelius, *Moment of Astrology*, p. 8.

¹⁶ Cornelius, *Moment of Astrology*, p.74.

¹⁷ Cornelius, *Field of Omens*, p. 2.

witchdoctors) in South Africa. She told me that a *sangoma* would ‘throw the bones’ (a collection of bones, stones and other small objects which have caught the sangoma’s eye) and then, ‘looking at the patterns made by the throw, they would begin to speak. I could see at the time, that they were seeing patterns and translating them into words. I could see I was doing the same thing with the [astrological] chart.’¹⁸

When the distinction between astrology-as-divination and astrology-as-science has been discussed over the last fifteen centuries, the terms used have often been, respectively, ‘judicial’ and ‘natural’ astrology. The original purpose of the distinction between these terms was to segregate what might be seen as a supernatural element in the practice. Thus the historian T. J. Tomlin asserted, ‘the end result of early modern disputes over astrology was the creation of a clear dividing line, not between reason and astrology but rather through astrology, dividing it into acceptable (natural) and unacceptable (judicial) forms.’¹⁹ The roots of the distinction can be traced back beyond early modernity; Campion for instance has traced it to a statement by Isidore of Seville (c. 560 – 636 CE):

astrology is partly natural, and partly superstitious. It is natural as long as it investigates the courses of the sun and the moon, or the specific positions of the stars according to the seasons; but it is a superstitious belief that the astrologers (mathematicus) follow when they practice augury by the stars, or when they associate the twelve signs of the zodiac with specific parts of the soul or body, or when they attempt to predict the natiivities and characters of people by the motion of the stars.²⁰

An effect of the scientific revolution, felt from the seventeenth century through to the present day, has been to predispose both advocates and critics of astrology towards the view that a true astrology would by definition be either science or at the least proto-science.²¹

¹⁸ Darby Costello, interview 2005.

¹⁹ T. J. Tomlin, *A Divinity for all Persuasions: Almanacs and Early American Religious Life* (Oxford University Press, 2014) p. 30.

²⁰ Isidore of Seville; Stephen A. Barney, W. J. Lewis, J. A. Beach and Oliver Berghof (trs.), *The Etymologies of Isidore of Seville* (Cambridge University Press, 2007) p. 99, Book III xxvii. Cited by Campion, *Medieval and Modern Worlds*, pp. 13 – 14.

²¹ A trend in the seventeenth century towards characterising and evaluating astrology in scientific terms was identified, for instance, by Lynn Thorndike, *A History of Magic and Experimental Science, Volume VII: The Seventeenth Century* (New York, NY: Columbia University Press, 1958) pp. 559 – 563; Keith

Cornelius found that the terms ‘natural’ and ‘judicial’ substantially matched the views of astrology-as-science and astrology-as-divination, respectively, but argued that the historical nuances and connotations associated with the former pair of terms, from centuries of use, made it preferable – in the interests of clarity – to use the latter pair of terms.²² This is the usage I follow in this thesis.

When he first laid out his case for seeing astrology as divination, Cornelius identified the former with the latter: ‘astrology is a phenomenon of experience rather than the experience of an objective phenomenon.’²³ He subsequently moved back somewhat from this position, to allow some validity to astrology-as-science:

some part of the phenomenon of astrology belongs to the natural world and is in principle amenable to scientific investigation. Nevertheless, the main part of what we do is the interpretation of symbols to arrive at particular inferences and judgments, whether about character or about events in life. And this practice is divination, not science.²⁴

The essentially interpretive, perspectival nature of divinatory astrology is brought out by an alternative term, ‘hermeneutic astrology’, coined by Curry in 1983.²⁵ Curry characterised this in two ways: First, by its opposition to ‘science, particularly technological science, and accompanying practical-manipulative-realist attitudes’; Second, as ‘precisely and powerfully “true”, in the sense of spiritually helpful... a way of preserving and developing a “magical” attitude’.²⁶ The involvement of the astrologer in a creative, interpretive capacity is integral to both, and the importance of interpretation was emphasised by Cornelius when he discussed hermeneutics in astrology:

Thomas, *Religion and the Decline of Magic* (London: Penguin, 1991), p.769; and P. M. Harman, *The Scientific Revolution* (London: Methuen, 1983) p. 32.

²² Cornelius, *Moment of Astrology*, p. 75.

²³ Cornelius, *Astrology and Divination*, p. 1. Original emphases.

²⁴ Geoffrey Cornelius, *Is Astrology Divination and Does it Matter?* (2000) <http://cura.free.fr/quinq/01gfcor.html> (accessed 17th August 2019). Delivered as a lecture at the United Astrology Congress, Atlanta, GA, 22nd May 1998; revised version published in *The Mountain Astrologer* (Issue 81: Oct – Nov 1998), pp. 38 – 45; published with further minor revisions on the CURA website in 2000 – this is the version quoted from.

²⁵ Patrick Curry, ‘An Aporia for Astrology’ in M. Budd, P. Curry, G. Douglas & B. Jaye, *Radical Astrology* (London, Radical Astrology Group, 1983) 5.2.

²⁶ Curry, *Aporia*, 5.2A (original emphases).

Hermeneutics is the study of meaning, and of how we arrive at our interpretations of things. In the context of astrology, the term implies a turning away from the common taken-for-granted assumption that a fixed astrological meaning is simply ‘there’, in front of us, as some sort of fact of nature. The hermeneutic enquiry in astrology reveals the essential dependency of the meaning of symbols on the act of *interpretation* of that meaning.²⁷

The term ‘hermeneutic astrology’ therefore illuminates what is meant by ‘divinatory astrology’ and may indeed be clearer and less ambiguous; all the same, I will use the latter term in this thesis, not least because – as has already been seen in chapter 1 – there is substantial precedent for the use of this term in recent academic discourse.²⁸

A distinction similar to that between the models of astrology as science and as divination can be found in critical accounts of astrology. Thus for instance in 1977 Geoffrey Dean et al noted that ‘the majority of astrologers reject a scientific approach in favour of symbolism... intuition, and holistic understanding.’²⁹ The French/American astrologer and composer Dane Rudhyar (1895 – 1985) was identified by Dean et al as ‘perhaps the leading exponent of this view’ and his thought will be considered below.³⁰ The distinction drawn between scientific and non-scientific approaches to astrology was also made in a text written by two professors of astronomy, Roger B. Culver and Philip A. Ianna, *Astrology: True or False? A Scientific Evaluation*.³¹ Culver and Ianna referred to the two forms as the ‘correlational’ (or ‘non-causal’) definition and the ‘cosmic forces’ definition, respectively.³² They defined the former, with reference to the works of Rudhyar, as taking ‘no interest in the physical causes and effects in celestial phenomena’, whilst the latter position was characterised by a quotation from the astrologer Nicholas deVore (1886 – 1960): ‘the science which treats of the influence upon human character of cosmic forces emanating from celestial bodies’.³³ Culver and

²⁷ Cornelius, *Moment of Astrology*, p.xxiii.

²⁸ For instance discussion of astrology as divination is a central theme in these PhD theses: Bird, *Astrology in Education*, Brockbank, *Responsive Cosmos*, Cornelius, *Field of Omens*.

²⁹ Dean et al, *Recent Advances*, p.2.

³⁰ Dean et al, *Recent Advances*, p.2 footnote.

³¹ Robert B. Culver and Philip A. Ianna, *Astrology: True or False? A Scientific Evaluation* (New York: Prometheus Books, 1988). Originally published as *The Gemini Syndrome: Star Wars of the Oldest Kind* (Tucson: Pachart Publishing, 1979); revisions made for subsequent publication.

³² Culver and Ianna, *Astrology: True or False?*, p. 2; p. 120 for ‘non-causal’.

³³ Nicholas deVore, *Encyclopedia of Astrology* (Totowa, NJ: 1976) p.28; cited in Culver & Ianna, *Astrology: True or False*, p. 2.

Ianna stated at the beginning of their text that ‘We shall subsequently concern ourselves with both views’.³⁴ They took it as given that a ‘cosmic forces’ or ‘non-causal’ explanation should at least yield statistically significant data.³⁵ This being so, it followed that a non-causal astrology – if true – would deliver statistically significant results as if it *were* causally-based, so that for Culver and Ianna the distinction between two forms of astrology was not a significant issue. In consequence their investigation of a non-causal, ‘correlational’, model of astrology was perfunctory. Their conclusion was that ‘the fundamental astrological principle... [is] the idea that human beings and their actions are influenced at least in part by celestial objects’ and that therefore, in order to be true, astrology would need to vindicate itself in scientific terms.³⁶ Dean et al have proposed a different distinction between two forms of astrology: ‘subjective astrology’ and ‘objective astrology’ are their terms.³⁷ This characterisation raises complex issues and will be treated separately in section 2.5.2 below.

2.3 Literature that treats Astrology as Science

As already seen in the case of Culver and Ianna, much of the literature that is critical of astrology takes it as given that the truth or falsity of astrological practice should be evaluated by scientific criteria. A central text is *Recent Advances in Natal Astrology* published in 1977, compiled by Geoffrey Dean, with the assistance of Arthur Mather and the involvement of fifty-two collaborators.³⁸ The text set out to address ‘The ultimate problem in astrology’, namely: ‘are astrological interpretations true or not?’³⁹

A starting point for the project was the premise that astrology worked – or at least, seemed to work – in the experience of its practitioners. Thus for example Dean referred to the apparent ability of astrologers to identify astrological themes in people’s charts simply from meeting them and stated that ‘Many of this book’s collaborators (including myself) have had considerable success in such diagnosis’.⁴⁰ Further, he stated that

³⁴ Culver & Ianna, *Astrology: True or False?*, p. 2.

³⁵ Culver & Ianna, *Astrology: True or False?*, p. 120.

³⁶ Culver & Ianna, *Astrology: True or False?*, p.181.

³⁷ E.g. in Phillipson, *Year Zero*, p. 128.

³⁸ Dean et al, *Recent Advances*.

³⁹ Dean et al, *Recent Advances*, p.23.

⁴⁰ Dean et al, *Recent Advances*, p.24. It appears from this statement that Dean was writing from his own experience, hence the references to ‘Dean’ rather than ‘Dean et al’ in this and the following paragraph.

‘[astrological] charts are often so exactly right in such unlikely ways that coincidence or gullibility would seem to be ruled out.’⁴¹ That said, Dean believed that coincidence and gullibility *did* need to be definitively ruled out before astrology could be considered true. Regarding his experiences of diagnosing astrological factors from meeting a person, he concluded that ‘no properly-controlled trials have been published, hence no conclusions are possible.’⁴² Thus after citing several astrologers testifying that astrology worked in their experience, Dean concluded that the question must arise, ‘how do astrologers know that astrology works?’⁴³ The experience that astrology seemed to work was not in doubt; the task he took on was to evaluate the truth-status of such experiences.

At the time of the composition of *Recent Advances*, there was considerable optimism that scientific research would demonstrate the truth of astrology beyond all doubt. In addition to Dean’s remarks above, this can be inferred from the involvement of three astrological organisations, and many astrologers, in the preparation and publication of the text. Dean’s perspective on science led him to dismiss some promising results from trials involving individual astrologers, arguing:

it is clear that the significant blind trials have not demonstrated that astrology works but only that astrologers work. Hence to adequately test astrology the participation of the astrologer must be eliminated.⁴⁴

The insistence on excluding the astrologer epitomises the focus, often encountered in critical evaluations of astrology, that in order to be true, astrology would necessarily be astrology-as-science. From this it follows that any subjective input would introduce bias and as such should be eliminated from the evaluation of astrology’s truth. Dean’s statement is controversial and has been specifically criticised by several astrologers

⁴¹ Dean et al, *Recent Advances*, p.25

⁴² Dean et al, *Recent Advances*, p.24.

⁴³ Dean et al, *Recent Advances*, p.24.

⁴⁴ Dean et al, *Recent Advances*, p.554.

including Cornelius, Bernadette Brady and Dennis Elwell.⁴⁵ It will be returned to in this chapter and throughout this thesis.

In 2016 Dean et al published another encyclopaedic volume, *Tests of Astrology: A critical review of hundreds of studies*.⁴⁶ In this it was made clear from the outset that the many studies of astrology referenced in the title yielded ‘quite consistent’ outcomes: ‘they deny that astrology is a source of factual truth’, although the possibility that astrology could still be ‘meaningful’ at a subjective level – explored in section 2.5.2 below – was also mooted.⁴⁷ Dean and his collaborators have contributed critiques of astrology to many encyclopaedias, journals and other texts, so that their perspective is often implicitly presented as authoritative, and is drawn on by many critics of astrology.⁴⁸ For instance, Culver and Ianna acknowledged having no experience of using astrology, and instead made extensive use of works by Dean et al.⁴⁹

Another prominent critic of astrology, cited in the previous chapter, is the biologist and popular science writer Richard Dawkins – well-known in the UK for his attacks on what he has characterised as ‘Enemies of Reason’, a category in which he included astrologers.⁵⁰ Dawkins’ prominence as a critic of astrology derives from his status as a

⁴⁵ Cornelius, *Moment of Astrology*, p. 62; Bernadette Brady, ‘The Newtonian Merry-Go-Round’ (2004), <https://geocosmic.org/research/the-newtonian-merry-go-round/> (checked 11th May 2017); Dennis Elwell, ‘The Researchers Researched’.

⁴⁶ Geoffrey Dean, Arthur Mather, David Nias, Rudolf Smit (principal compilers), *Tests of Astrology: A critical review of hundreds of studies* (Amsterdam: AinO Publications, 2016). The description ‘principal compilers’ is from p. 2; the contribution of numerous ‘helpers’ is also acknowledged at p. 1 and by reference throughout the text.

⁴⁷ Dean et al, *Tests of Astrology*, p. 3.

⁴⁸ Examples include: I. W. Kelly, ‘Astrology, Cosmobiology, and Humanistic Astrology’ in Patrick Grim (ed.), *Philosophy of Science and the Occult* (State University of New York Press: 1982) pp. 47 – 70; David K. B. Nias and Geoffrey A. Dean, ‘Astrology and Parapsychology’ in Sohan Modgil and Celia Modgil (eds.) *Hans Eysenck: Consensus and Controversy* (Philadelphia, PA: Falmer, 1986) pp. 361 – 375; I. W. Kelly, G. A. Dean & D. H. Saklofske, ‘Astrology: A Critical Review’ in Patrick Grim (ed.), *Philosophy of Science and the Occult (2nd edn.)* (State University of New York Press: 1990) pp. 51 – 84; Geoffrey Dean, Arthur Mather and Ivan W. Kelly, ‘Astrology’ in Gordon Stein (ed.), *The Encyclopedia of the Paranormal* (Amherst, NY: Prometheus, 1996) pp. 47 – 99; G. A. Dean, D. K. B. Nias and C. C. French, ‘Graphology, astrology and parapsychology’ in Helmuth Nyborg (ed.), *The Scientific Study of Human Nature: Tribute to Hans J. Eysenck at Eighty* (Oxford: Pergamon, 1997) pp. 511 – 542; Geoffrey Dean, ‘The Case for and Against Astrology’ in Bryan Farha (ed.), *Paranormal Claims: A Critical Analysis* (Lanham, MD: University Press of America, 2007) pp. 115 – 129; reprinted in expanded and re-titled second edition, Bryan Farha (ed.), *Pseudoscience and Deception: The Smoke and Mirrors of Paranormal Claims* (Lanham, MD: University Press of America, 2014) pp. 87 – 106.

⁴⁹ Culver & Ianna, *Astrology: True or False?*, p. 220: ‘True, we haven’t practiced astrology...’

⁵⁰ ‘The Enemies of Reason’ was the title of a two-part documentary on Channel 4 in the UK, first shown on 13th August 2007 and 20th August 2007 (parts 1 & 2 respectively). His most substantial critique of astrology was: Dawkins, ‘Real Romance in the Stars’.

popular exponent of science rather than any significant acquaintance with horoscopic work. Indeed Dawkins acknowledged in 1996 that the focus of his criticism was Sun-sign astrology, not horoscopic work, and added: ‘If there is good evidence... that some other kinds of astrology work, well and good. I have to say that I’d be extremely surprised.’⁵¹ This point notwithstanding, his arguments are sufficiently broad – proceeding from laws of physics to the implausibility of a basis for astrology as a causal science – that they can easily be applied to horoscopic astrology, and his concise articulation of the issues provides a good reason for so doing. His concision and his exclusive focus on basic scientific principles can be seen in the following statement, which epitomises the case for testing astrology’s truth in scientific terms, and for finding it to be wanting:

For us to take a hypothesis seriously, it should ideally be supported by at least a little bit of evidence. If this is too much to ask, there should be some suggestion of a reason why it might be worth bothering to *look* for evidence... But astrology has nothing going for it at all, neither evidence nor any inkling of a rationale which might prompt us to look for evidence.⁵²

By this point in the article Dawkins had made it clear that what would count as ‘evidence’ for him would be statistical data rather than the experiences of astrologers and their clients; and that a reason that would justify investigating astrology would necessarily take the form of a causal influence from horoscopic factors that might affect life on Earth. His focus, therefore, was astrology-as-science.

2.4 Literature that Treats Astrology as Divination

As stated in chapter 1, I will draw particularly on Cornelius’s treatment of astrology-as-divination in this thesis. As regards both the subject, and my focus on Cornelius’s analysis, I follow several recent theses. For instance Alison Bird argued that ‘Reflective theorists with a practical interest in the subject acknowledge that the “astrology as divination” model is – after all – the only serious contender for any kind of effective

⁵¹ Richard Dawkins, ‘Real Romance in the Stars’, footnote added to the article as reprinted in *The Astrological Journal* (Vol. 38 No. 3, May/June 1996), p. 141 n. 4.

⁵² Dawkins, *Real Romance in Astrology*, pp. 17 – 18.

defence in formal terms.’⁵³ James Brockbank characterised ‘the central argument’ of his thesis as being ‘that astrology is best understood as a form of divination.’⁵⁴ Bird and Brockbank both draw heavily on Cornelius’s discussions of astrology as divination.

The critical analysis of astrology by Dean et al was a major stimulus to Cornelius’s thought. His development of a divinatory perspective provided a way of thinking about astrology that, whilst accepting much of the criticism of the subject advanced by Dean et al, did not see the validity of the entire subject thereby dismissed. Thus for example Cornelius described *Recent Advances* by Dean et al as ‘vast and comprehensive’ and the ‘archetypal text’ for the view of astrology as science; and accepted early in his first explicit argument for astrology-as-divination that ‘the scientific revolution has revealed the greater part of astrology as pseudo-science...’⁵⁵

In order to develop the context for Cornelius’s position it is necessary to discuss Dane Rudhyar in more detail. Within astrology Rudhyar is particularly known for his integration of C. G. Jung’s thought into astrology.⁵⁶ It is widely acknowledged that he had a major influence on contemporary astrology, with the journalist and lecturer Erik Davis arguing that he ‘decisively shaped modern astrology’ and Campion describing him as ‘possibly the most influential American astrologer of the 20th century’.⁵⁷ Cornelius holds Rudhyar in high regard for having developed the principles behind the model of astrology as divination, and has suggested that Rudhyar was ‘truly representative of the most significant shift in astrological attitude in modern times.’⁵⁸ The difference in approach between Cornelius and Rudhyar is subtle, with both distinguishing between scientific and non-scientific forms of astrology. In his preface, written in 1970, to the second edition of his 1936 book *The Astrology of Personality*, Rudhyar alluded briefly to a scientific conception of astrology but concluded that he would not be considering astrology as ‘a kind of age-old empirical and essentially

⁵³ Bird, *Astrology in Education*, p. 85.

⁵⁴ James Brockbank, *Responsive Cosmos*, p.19. At <http://www.the9thhouse.org/theses.htm> (checked 13th July 2015).

⁵⁵ Cornelius, *Astrology and Divination*, p.1.

⁵⁶ Deniz Ertan, *Dane Rudhyar: His Music, Thought, and Art* (Rochester, NY: University of Rochester Press, 2009) pp. 79 – 80.

⁵⁷ Erik Davis, ‘The Counterculture and the Occult’ in Christopher Partridge (ed.), *The Occult World* (Oxford: Routledge, 2015) p. 640; Nicholas Campion, *Astrology and Cosmology*, p. 197.

⁵⁸ Cornelius, *Moment of Astrology*, p.95.

Events-Oriented science’ for the reason that ‘I do not believe that this type of astrology is what we need today’.⁵⁹ He reiterated and expanded upon this conception of two types of astrology in *The Pulse of Life*, also published in 1970, arguing that the first considered ‘the realm of the sky as that of... controlling Powers which exert a constant influence upon the passive... realm of earthly activities’.⁶⁰ The second type of astrology, he continued, considered that ‘There is order everywhere, *but man is blind to it while he is passing from one type of order to the... more inclusive type*. What he feels as chaos on the earth-surface is the result of his incomplete vision.’⁶¹ Rudhyar dubbed the two positions, ‘events-oriented’ and ‘person-centered’ forms of astrology.⁶² He did not deny efficacy to an events-oriented astrology which ‘deals essentially with collective factors, with human nature as a product of biospheric conditions.’⁶³ For him, however, astrology would only reach its potential when it was involved in the individual’s emergence from ‘the sphere where this human nature compulsively and unconsciously operates’, showing them how to ‘actualize as fully as possible [their] birth-potential.’⁶⁴

It remains unclear whether, for Rudhyar, the important role of subjectivity in astrology is an historical contingency, relevant only for a period in human history in which people are victims of ‘incomplete vision’, or whether this is an intrinsic quality of much astrological work. Cornelius has argued that Rudhyar did not quite carry this insight through consistently into his philosophy of astrology, on the basis of the latter’s allusions to a mechanism at the back of astrology, and reference to ‘seed moments’ which suggested to Cornelius that Rudhyar’s shift ‘occurred within the broad limits set for us by Ptolemy’.⁶⁵ The significance of the term ‘seed moments’ is found in Rudhyar’s argument that, in natal astrology, the moment the new-born takes its first

⁵⁹ Dane Rudhyar, *The Astrology of Personality: A Re-formulation of Astrological Concepts and Ideals, in Terms of Contemporary Psychology and Philosophy* (3rd edn.) (Garden City, NY: 1970 [1936]), pp.xi. Original emphasis and capitalisation.

⁶⁰ Dane Rudhyar, *The Pulse of Life* (Berkeley, CA: Shambhala, 1970 [1943]) p. 14.

⁶¹ Rudhyar, *Pulse of Life*, p. 15.

⁶² Dane Rudhyar, *From Humanistic to Transpersonal Astrology* (Palo Alto, CA: The Seed Center, 1975 [1972]) pp. 21-2.

⁶³ Rudhyar, *From Humanistic to Transpersonal*, p. 27.

⁶⁴ Rudhyar, *From Humanistic to Transpersonal*, p.29.

⁶⁵ Geoffrey Cornelius, ‘From Primitive Mentality to Haecceity: The Unique Case in Astrology and Divination’ in Patrick Curry and Angela Voss (eds.), *Seeing with Different Eyes: Essays in Astrology and Divination* (Newcastle: Cambridge Scholars Publishing, 2007) p. 229; Cornelius, *Moment of Astrology*, p. 95.

breath 'is to be regarded as the "seed moment" of the complete life-span of this organism.'⁶⁶ He allowed some latitude for individual free-will to affect the way in which the seed grew; but the analogy, and his discussion of it, suggest a sufficiently concrete correspondence between horoscope on one hand, and character and life events on the other, to make it seem that similar seeds should show similar traits. This might be expected to be detectable through statistical analysis, which would preclude the characterisation of astrology as beyond the reach of science.

The furthest Rudhyar moved from the analogy of seeds came in his discussion of horary astrology. In describing the process involved in such charts, Rudhyar wrote that 'God (as personification of universal intelligence and spiritual vitality) always seeks to restore harmony and health in every individual... This... is the substance of "Grace"... Horary astrology is a dramatic presentation of the operation of this divine Grace.'⁶⁷ It seems conceivable that an astrology which served purely as a way for divine grace to express itself might be inscrutable to human conceptions of truth. This however would not be Rudhyar's position, for two reasons. First, he only characterised the horary form of astrology in this way. Second, even where horary astrology was concerned, he emphasised the need for the chart to be 'properly timed', meaning that the horary question must be asked 'at a significant time'.⁶⁸ Even in Rudhyar's view of horary astrology, therefore, there seems to persist an objective order with which the individual needs to connect in order for astrology to function.

2.4.1 Two Forms of Divination: Artificial and Natural

When astrology is discussed as a form of divination, a distinction between two forms of divination is implicated. The two forms are: *artificial divination* (also known as

⁶⁶ Dane Rudhyar, *Person-Centered Astrology* (New York, NY: ASI Publishers, 1980 [1972]), p. 176.

⁶⁷ Dane Rudhyar, *The Practice of Astrology – As a Technique in Human Understanding* (Boulder, CO: 1978 [1968]) p.138.

⁶⁸ Rudhyar, *Practice of Astrology*, p. 138. Rudhyar suggested that the question of whether a horary chart was 'properly timed' be answered by reference to: a) the presence of close connections between it and the chart of the querent; b) by reference to a traditional element of horary astrology known as the 'considerations before judgement', according to which some charts indicate that for one reason or another the question will not be answered by that particular chart. Discussed in e.g.: Lilly, *Christian Astrology* pp. 121 – 123.

‘inductive’, ‘deductive’, ‘conjectural’, ‘noninspirational’, ‘learned’ or ‘technical’ divination), and *natural divination* (also known as ‘intuitive’, ‘inspirational’, ‘emotive’, ‘untechnical’, ‘unlearned’ or ‘inspired’).⁶⁹ The distinction may be seen in Plato’s *Phaedrus*, wherein Socrates characterised ‘sign-based prediction’, which involved observation of ‘birds and other signs’ coupled with reasoning on one hand, and ‘prophecy’ on the other.⁷⁰ The distinguishing feature of prophecy was that its exemplars, such as the prophetess of Delphi and the priestesses at Dodona, were ‘out of their minds when they perform that fine work of theirs... but they accomplish little or nothing when they are in control of themselves.’⁷¹ The distinction was repeated by Cicero (106 – 43 BCE): ‘there are two methods of divining; one dependent on art, the other on nature.’⁷² Artificial divination thus involves the use of a system, such as astrology, whereas natural divination works through possession, or inspiration, and therefore does not require a symbolic system such as astrology. The terms ‘mechanical’ and ‘mystical’ are sometimes used and have similar connotations to ‘artificial’ and ‘natural’ respectively.⁷³ Similar distinctions between forms of divination are also found outside western culture, albeit they often emerge from the efforts of western anthropologists to understand the cultures they encounter.⁷⁴

Given this characterisation of the two forms, it will be evident that when astrology-as-divination is discussed, it is artificial divination that is spoken of. Thus for example in

⁶⁹ Synonyms, and discussion: Giovanni Manetti (tr. Christine Richardson), *Theories of the Sign in Classical Antiquity* (Bloomington, IN: Indiana University Press, 1993 [1987 as *Le teorie del segno nell'antichità classica*]) p.19; pp. 19 – 22; Rebecca L. Stein and Philip Stein, *The Anthropology of Religion, Magic and Witchcraft (3rd edn.)* (Upper Saddle River, NJ: Prentice Hall/Pearson, 2011 [2005]) p. 148; pp. 147 – 157; Sarah Iles Johnston, *Ancient Greek Divination* (Chichester: Wiley/Blackwell, 2008) p. 9.

⁷⁰ Plato; Alexander Nehamas and Paul Woodruff (trs.), *Phaedrus* in: Plato, John M. Cooper (ed.), *Plato: Complete Works* (Indianapolis, IN, Hackett, 1987) p. 523 (244c).

⁷¹ Plato, *Phaedrus* p. 522 (244b); 522-3 (244) for context.

⁷² Cicero, *On Divination*, in: Marcus Tullius Cicero, C. D. Yonge (tr.), *The Nature of the Gods and On Divination* (Amherst, NY: 1997) p. 146, I.VI (cf p. 189, I. XLIX; p. 210, II, XI.)

⁷³ Jacob K. Olupona, ‘Owner of the Day’ in Michael Winkelman and Philip M. Peek, *Divination and Healing: Potent Vision* (Tucson, AZ: University of Arizona Press, 2004) p. 107. Olupona cited: L. Marshall ‘!Kung Bushmen religious beliefs’, *Africa* 32 (3) (1962), pp. 221 – 52; A. B. Child and I. L. Child, *Religion and Magic in the life of traditional peoples* (Englewood Cliffs, NJ: Prentice Hall, 1997) p. 82.

⁷⁴ For different approaches to the categorisation of divination in African cultures which overlap with the distinction under discussion: Michael Winkelman and Philip M. Peek, ‘Introduction’ in Michael Winkelman and Philip M. Peek (eds.), *African Divination Systems: Ways of Knowing* (Bloomington, IN: Indiana University Press, 1991), pp. 11 – 14. For a specific parallel: the distinction between mediumistic divination and the chicken oracle in central Sukumaland, Tanzania, in Koen Stroeken, ‘In Search of the Real: The Healing Contingency of Sukuma Divination’ in: Winkelman and Peek, *Divination and Healing*, pp. 29 – 30.

his thesis, Cornelius stated at the outset that the term ‘artificial divination’ could serve to define his field of study, at least as an ‘approximation’.⁷⁵ In order for artificial divination to be adequately characterised, it is necessary to add the qualification that the difference between natural and artificial divination is a difference of degree rather than of kind. This is a point that Cornelius was keen to establish: ‘natural divination overlaps with artificial forms... so that a hard-and-fast distinction becomes misleading’; ‘elements of “natural” divination are also fully at work in all inductive (“artificial”) divination’.⁷⁶ In similar vein, the professor of classics Michael Flower remarked that any simple dichotomy between natural and artificial divination would be flawed, for ‘in many systems of divination ecstatic states and inductive methods can be combined in a way that is difficult to categorize.’⁷⁷ Flower cited the anthropologist Philip M. Peek:

a key to our understanding of divination is found in the continual reference to an intermediate category between the poles of mathematical calculation and spirit mediumship. All analyses try to distinguish those forms involving ecstatic states from those performed in normal states of consciousness, yet the only real difference between them is that in ecstatic states the occult powers “speak” through the diviner rather than the divinatory apparatus. All divination forms involve a non-normal state of inquiry which then requires a “rational” interpretation...⁷⁸

In Peek’s account therefore, divination is always innately hybrid insofar as it necessarily involves what he called the ‘divinatory apparatus’ *and* communication from ‘occult powers’. This hybrid nature is crucial to the definition of artificial divination, and therefore to astrology-as-divination. If it were simply a case of allowing ‘gods’ or ‘occult powers’ to speak, there would be no role for astrology – an issue that was raised by Roy Gillett, an astrologer and President of the UK’s Astrological Association from 1999 to date:

If the consultation... is a matter of “asking the gods ‘what should be done’”, what need is there for rigorous study of [the writings of the astrologer] Lilly, the Vedas, Hellenic astrology? If

⁷⁵ Cornelius, *Field of Omens*, p. 2.

⁷⁶ Cornelius, *Field of Omens*, p. 3; p. 14.

⁷⁷ Michael Attyah Flower, *The Seer in Ancient Greece* (Berkeley, CA: University of California Press, 2008) p. 86.

⁷⁸ Philip M. Peek, ‘Introduction’ in Philip M. Peek (ed.), *African Divination Systems: Ways of Knowing* (Bloomington, IN: 1991) cited in Flower (2008) p. 86. (I have included an additional sentence compared to the passage as cited by Flower.)

astrology is no more than divination, why not leave every adviser to make up their own models and images?⁷⁹

On the other hand, if astrology-as-divination could function without the involvement of ‘gods’ or ‘occult powers’, there would be no reason not to evaluate astrology-as-divination statistically, in terms of the accuracy of its readings. This is a position for which Dean et al have argued, as will be discussed in section 2.5.1. It may be unclear at this point why astrology-as-divination, understood as artificial divination in the hybrid form discussed above, would not be susceptible to scientific, statistical analysis. In order to explore this it is necessary to return to Cornelius’s discussion of ‘the unique case of interpretation’, already mentioned in chapter 1.

2.4.2 The Unique Case of Interpretation

Cornelius defined the ‘unique case of interpretation’ as follows:⁸⁰

This is the participatory, context-determined and non-replicable instance of divination. Like all ‘historical’ events, or like any event of human and personal meaning, such as speaking or an action of an individual, it is *singular* and cannot be described from any other vantage point than its own. Abstraction and quantification, lumping it together with other unique cases, risks obliterating it.⁸¹

An account that suggests why astrological readings could have these qualities came from the astrologer Robin Heath:

It is my view, formed over 25 years of being very interested in both the history and practice of astrology, that “doing a chart” is quite similar to the act of prayer. The cosmos (sky, God, gods, the “above”, heaven) is being contacted, knows that this is happening, and responds accordingly to the circumstances prevailing at the time and the consciousness of the astrologer.⁸²

⁷⁹ Roy Gillett, ‘The “middle way” model of astrology: a response to Garry Phillipson’s article’, *Correlation* Vol 24(1), 2006 pp. 67 – 8.

⁸⁰ Discussed e.g. in Cornelius, *Moment of Astrology* ch. 10, pp. 184 – 202.

⁸¹ Cornelius, *Field of Omens*, p. 47.

⁸² Robin Heath quoted in: Robert Lomas, *Turning the Solomon Key: Decoding the Masonic symbols and history of Washington DC* (London: Corgi/Transworld, 2009 [2006]), p. 109. Cited as ‘private communication’ from Robin Heath (p. 321, n. 96).

In Heath's description, astrology involves a participatory exchange between the cosmos and humans that proceeds from the context that exists at the time of the reading. In this view each reading is necessarily unique, which would undercut the assumption often found amongst critics of astrology, and indeed many astrologers, that the function of astrology is simply to provide objective information. In similar vein, Curry argued that 'every prediction is also an intervention', and that 'this truth precludes any fantasies of perfect and complete foreknowledge'.⁸³ Developing this perspective, Curry suggested that 'the paradigmatic divinatory question is not 'What will happen?' but '*What should I do?*'.⁸⁴ The 'unique case' is central to the idea of astrology-as-divination, and will be returned to and explored throughout this thesis, especially in chapters 6 and 7. The idea draws upon a number of parallels and they will be explored in the two following sub-sections (2.4.3 and 2.4.4).

2.4.3 C. G. Jung and Synchronicity

Cornelius and Rudhyar both asserted the relevance of C. G. Jung's thought for an understanding of astrology. Rudhyar first became 'fully acquainted' with the thought of Jung in 1933, and it was a major influence on his approach to astrology thereafter.⁸⁵ He stated, quoting Jung, that to live consciously was to integrate consciousness with the collective unconscious, which could be achieved through a 'psychic process of development which expresses itself in symbols.'⁸⁶ Rudhyar saw astrology as a suitable symbolic form – as did Jung, though Jung's attitude was more variable and ambiguous.⁸⁷ Jung's theory of synchronicity is a possible explanatory mechanism for astrology, and this has been the primary focus of Cornelius's involvement with Jungian thought. Thus for instance he suggested that:

As soon as astrology drops the illusion of a causal mechanism, its phenomena, like those of the more obviously divinatory practices such as reading Tarot cards and tea leaves, takes on a more

⁸³ Curry in: Willis and Curry, *Astrology Science and Culture*, p.55.

⁸⁴ Curry in: Willis and Curry, *Astrology Science and Culture*, p.57.

⁸⁵ By Rudhyar's account he began studying astrology in 1920, and first became 'fully acquainted' with Jung's thought in 1933(Rudhyar: *From Humanistic to Transpersonal*, p. 9 & p. 11.)

⁸⁶ Dane Rudhyar, *The Astrology of Personality* p.113. Rudhyar quoted: C. G. Jung, 'Commentary on "The Secret of the Golden Flower"' in: C. G. Jung, R. F. C. Hull (tr.), *Alchemical Studies (The Collected Works of C. G. Jung Vol. 13)* (Princeton, NJ: Princeton University Press, 1983 [1967]) p.21 [para 31].

⁸⁷ Maggie Hyde, *Jung and Astrology* for analysis of the range of Jung's perspective on astrology.

distinctly 'paranormal' quality. Jung's concept of Synchronicity (meaningful coincidence where there is no causal connection) may provide us with a key to the description of astrological phenomena.⁸⁸

Jung's most detailed account of synchronicity is in an article published in 1952 (1955 in English translation), in which he defined it as follows: 'Synchronicity... means the simultaneous occurrence of a certain psychic state with one or more external events which appear as meaningful parallels to the momentary subjective state – and, in certain cases, vice versa.'⁸⁹ The concept of synchronicity was intertwined with astrology from early in its development, since Jung used astrological tests to develop the idea in his 1952 article.⁹⁰ The relevance of synchronicity as a possible explanation of astrology has since become widely established; for instance, Campion stated, 'The concept of synchronicity... is frequently used to explain modern astrology', and Culver and Ianna wrote, 'the most popular of the non-causal explanations for the astrological influences is the concept of "synchronicity".'⁹¹

Rudhyar responded to synchronicity with initial enthusiasm but subsequent suspicion. Writing in 1971, he proposed it as a suitable explanatory model for astrology:

What conceivable type of mechanism or process could explain the direct action of a particular planet upon a particular person... To solve the problem, Carl Jung introduced the concept of "synchronicity"; that is, what happens at any moment of time carries everywhere the characteristic quality of this moment. But when one advances into such a metaphysical concept one leaves the field of empirical science.⁹²

⁸⁸ Cornelius, *Astrology and Divination*, p. 3.

⁸⁹ C. G. Jung, 'Synchronicity: An Acausal Connecting Principle' [1952] in *The Structure and Dynamics of the Psyche: Collected Works Vol. 8* (2nd Edition) (London: Routledge, 1969) p.441/para 850. This is the third of three major texts on the subject by C. G. Jung, the others are: 'Foreword to the "I Ching"' in: C. G. Jung, R. F. C. Hull (tr.), *C. G. Jung – Collected Works, Volume 11, Psychology and Religion: West and East* (New York: Pantheon, 1958) pp.589 – 608 (964 – 1018) [first published 1950]; 'On Synchronicity' in: C. G. Jung, R. F. C. Hull (tr.), *C. G. Jung – Collected Works, Volume 8, The Structure and Dynamics of the Psyche* (2nd edn.) (London: Routledge & Kegan Paul, 1969), pp. 520 – 531 (969 – 997) [1951].

⁹⁰ See particularly section 2, 'An Astrological Experiment' in Jung, *Synchronicity: Acausal Principle*, pp. 459 – 484 (872 – 915).

⁹¹ Nicholas Campion, *The Practical Astrologer* (Twickenham: Hamlyn, 1987) p.9, Culver and Ianna, *Astrology: True or False?*, p.120.

⁹² Dane Rudhyar, *Person-Centered Astrology*, p. 74.

By 1973 however Rudhyar's estimation of synchronicity had diminished and he described it as 'a word that actually only adds to the mystery'.⁹³ It seems likely that Rudhyar's objections to Jung's formulation of synchronicity derive from the compromises and obfuscations into which Jung found himself pitched by his attempts to put the theory on a scientific footing. This trait in Jung's approach was identified by Roderick Main when he referred to Jung's 'foregrounding of the scientific evidence for his theory and downplaying its nevertheless easily detectable religious influences'.⁹⁴ Jung desired to create dialogue between science and religion even though – at least some of the time – he regarded the two as 'incommensurable'.⁹⁵ In consequence there is a tension between the subjective and the objective in his definitions which mirrors that found when astrology's nature is discussed. This point was articulated by Hyde, whose analysis was cited by Cornelius.⁹⁶ Hyde addressed the problem of synchronicity's definition by observing that Jung offered two distinct formulations, which she dubbed 'Synchronicity I' and 'Synchronicity II':

The first version (Synchronicity I) suggests that there is a relationship between an objectively observed psyche and objectively observed events. If this was so, these interconnections could be studied objectively...the second version (Synchronicity II), acknowledges the subjective participation of the observing psyche, that is, the psyche of the one who seeks to observe this law at work. This is evident in the lawless, one-off, uncanny, unpredictable, 'just-so' nature of synchronistic events of which Jung the diviner was only too aware.⁹⁷

This distinction between two forms of synchronicity parallels the two different models of astrology that were outlined in section 2.2 above. Under 'Synchronicity I', it would be possible to confirm astrology's truth under a scientific frame of reference. 'Synchronicity II', however, by giving more emphasis to the subjective, is outside science's reach and therefore perhaps better fitted to serve as an explanatory principle for astrology as divination. An illustration of what this emphasis on the subjective

⁹³ Dane Rudhyar, *An Astrological Mandala: The Cycle of Transformation and its 360 Symbolic Phases* (New York, NY: Vintage Books, 1974 [1973]) p. 350.

⁹⁴ Roderick Main, *The Rupture of Time: Synchronicity and Jung's Critique of Modern Western Culture* (Hove: Brunner-Routledge, 2004) p. 106.

⁹⁵ C. G. Jung, letter to Pastor Max Frischknecht, 8th February 1946 in: C. G. Jung; G. Adler & A Jaffé (eds.), R. F. C. Hull (trans.), *Letters of C. G. Jung: Volume 1, 1906 – 1950* (London: Routledge & Kegan Paul, 1973) p.411

⁹⁶ Cornelius, *Moment of Astrology*, p. 78.

⁹⁷ Maggie Hyde, *Jung and Astrology* (London: Aquarian/Harper Collins, 1992), p. 128.

could mean can be seen in Jung's suggestion that responses from the *I Ching* 'take into account the hidden individual quality in things and men, and in one's own unconscious self as well.'⁹⁸ As Main noted, this means that the *I Ching* can sometimes address the 'unconscious preoccupations' of the person who consulted it, regardless of the question explicitly posed.⁹⁹ As was noted regarding the 'unique case' in the previous subsection, what transpires in divination is not necessarily the provision of an objective informational response to the question on the querent's mind. Hyde remarked a similar experience with astrological work:

You have to practise your [astrological] work as if it were objective, and about other people and other things in the world, but every now and again that objective position is actually cut through by something else... you suddenly find that the symbols don't just address that objective thing in the world, but... they are talking... about you and where you are coming from, and what you are up to, in something else quite different in your life.¹⁰⁰

In discussing precedents for the concept of synchronicity, Jung focused particularly on the concept from Chinese philosophy of *Tao* as a fundamental universal principle; he emphasised Richard Wilhelm's translation of *Tao* as 'meaning', and went on to characterise that meaning, in the Western tradition, as involving 'the presence in the microcosm of macrocosmic events.'¹⁰¹ From there, Jung went on to discuss the principle of microcosm-macrocosm correspondence, or sympathy, as a precursor to synchronicity.¹⁰² This principle has also long been cited as a supportive cosmological context for astrology.

2.4.4 Macrocosm/Microcosm

Macrocosm-microcosm thought sees the universe as conscious, and posits sympathy or correspondence between it and individual members of the human race.¹⁰³ The idea of

⁹⁸ Jung, Foreword to the *I Ching*, p.596 [983].

⁹⁹ Main, *Rupture of Time*, p. 42.

¹⁰⁰ Hyde quoted in: Phillipson, *Year Zero*, p. 184.

¹⁰¹ Jung, *Synchronicity: Acausal Principle*, p. 486 [917].

¹⁰² Jung, *Synchronicity: Acausal Principle*, pp. 489 – 502 [924 – 942]. For a more detailed account of the influences Jung acknowledged: Main, *Rupture of Time*, p. 90.

¹⁰³ Donald Levy, 'Macrocosm and Microcosm' in Donald M. Borchert (ed.), *Encyclopedia of Philosophy* (2nd edn.) (New York: Thomson Gale, 2006) Vol.5, p.639. For an historical account of the principle of sympathy from the ancient to the modern world: Seth Lobis, *The Virtue of Sympathy: Magic, Philosophy*

sympathy is often traced back to the founder of Stoicism, Zeno of Citium (c. 334 BCE – c. 262 BCE).¹⁰⁴ According to the biographer of philosophers Diogenes Laertius (fl. 3rd century CE) Zeno said: ‘The world has no empty space within it, but forms one united whole. This is a necessary result of the sympathy and tension which binds together things in heaven and earth.’¹⁰⁵

A contrary position was taken by Cicero. He dismissed the possibility that divination was united with ‘the nature of things... so as to form one harmonious whole, which I see is the opinion of the natural philosophers, and especially of those who say that all things that exist are but one whole’.¹⁰⁶ His comments seem to have been aimed primarily at the Stoics, particularly Chrysippus (c. 280 – c. 207 BCE) and Posidonius (c. 135 – c. 51 BCE).¹⁰⁷ Plotinus on the other hand asserted the existence and efficacy of sympathy, stating that magic spells could be explained ‘By the reigning sympathy and by the fact in Nature that there is an agreement of like forces and an opposition of unlike, and by the diversity of those multitudinous powers which converge in the one living universe.’¹⁰⁸ This perspective was shared by Ficino, for whom ‘the parts of this world, like the parts of a single animal, all deriving from a single author, are joined to each other by the communion of a single nature.’¹⁰⁹ The principle of sympathy was articulated, in different terms, by Cornelius when he argued: ‘An essential feature of the “divinatory attitude” would seem to be the understanding that there is an “active participation” between man and his world, to the extent that the two may not be finally differentiated.’¹¹⁰ From this perspective, pairs of terms that refer to the macrocosm and the microcosm (such as universe/individual or cosmos/person) refer to appearance only.

and *Literature in Seventeenth Century England* (New Haven, CT: Yale University Press, 2015) pp. 4 – 35.

¹⁰⁴ E.g. A. A. Long, *From Epicurus to Epictetus: Studies in Hellenistic and Roman Philosophy* (Clarendon/Oxford University Press, 2006) p. 130; P. G. Maxwell-Stuart, *Astrology: From Ancient Babylon to the Present* (Stroud: Amberley, 2010) p. 26.

¹⁰⁵ Diogenes Laertius, R. D. Hicks (tr.), ‘Zeno’ in: *Diogenes Laertius: Lives of Eminent Philosophers Vol. 2* (London: William Heinemann, 1925) p. 245, Book VIII para. 140.

¹⁰⁶ Cicero, *On Divination*, pp. 212-3 [II. XIV].

¹⁰⁷ Georg Luck, *Arcana Mundi: Magic and the Occult in the Greek and Roman Worlds* (Baltimore, MD: The Johns Hopkins University Press, 1985) p. 270.

¹⁰⁸ Plotinus, *Enneads*, p. 369 [Ennead IV. 4. 40].

¹⁰⁹ Marsilio Ficino, Sears Jayne (tr.), *Commentary on Plato’s Symposium on Love* (Woodstock, CT: Spring Publications, 1985) p. 127, Speech VI. Angela Voss observed that in addition to Plotinus, Iamblichus, Proclus and Synesius would also be included in a full account of Ficino’s Platonism: Marsilio Ficino, Angela Voss (ed.), *Marsilio Ficino* (Berkeley, CA: North Atlantic Books, 2006) p. 21.

¹¹⁰ Cornelius, *Astrology as Divination*, p. 1.

The separation of the two – and therefore the definition of each – would lack any ultimate ontological reality. The philosophical and religious precedents for, and implications of, this will be explored in chapter 6. In addition, there is a consequence for the terminology used in this thesis: when terms referring to macrocosmic and microcosmic entities are used in the context of astrology-as-divination, it is implicit that what is referred to may only be appearance, and that the use of the terms should not be taken to imply their reality as separate entities. Terminological exactitude would argue for the use of qualified terms – such as ‘apparent individual’ and so forth – throughout. I have however chosen to use such formulations infrequently, on the grounds that the continual repetition of ‘apparent’ and its cognates would be more otiose than illuminative.

The involvement of astrology with macrocosm-microcosm thought has a long history. For instance the historian of science David C. Lindberg (1935 – 2015) described astrology in the 12th century CE in the west as ‘Closely associated with the macrocosm-microcosm analogy’.¹¹¹ This relationship is sometimes summarised with the phrase attributed, in the *Emerald Tablet*, to Hermes Trismegistus: “That which is above is like to that which is below, and that which is below is like to that which is above, to accomplish the miracles of one thing.”¹¹² This phrase has been invoked as a cosmological context for astrology and alchemy for several centuries. For instance, William Lilly’s friend and supporter Elias Ashmole (1617 – 1692) cited it in a magical-alchemical text in 1652.¹¹³ Nicholas Culpeper (1616 – 1654) cited it in *Astrological Judgement of Diseases from the Decumbiture of the Sick* in 1655.¹¹⁴ The phrase was quoted many times in HP Blavatsky’s (1831 – 1891) Theosophical texts, and a few

¹¹¹ David C. Lindberg, *The Beginnings of Western Science – The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to A.D. 1450* (2nd edn.) (University of Chicago Press, 2007), p.214.

¹¹² This translation into English was made by Steele and Waley from a 12th-century Latin translation of an Arabic version, originally published in: Robert Steele, Dorothea Waley Singer, ‘The Emerald Table’, *Proceedings of the Royal Society of Medicine* Vol.21 (1928), p.42, also cited in: Stanton J. Linden, *The Alchemy Reader – from Hermes Trismegistus to Isaac Newton* (Cambridge University Press, 2003), pp.27-8. The full text of the Emerald Tablet is reproduced in many other texts, e.g. Wayne Shumaker, *The Occult Sciences in the Renaissance* (Berkeley: University of California Press, 1972) pp.179-80.

¹¹³ Elias Ashmole, *Theatrum Chemicum Britannicum* (London, Brooks, 1652), p.446. Thanks to Ruth Clydesdale for this reference.

¹¹⁴ Nicholas Culpeper, *The Judgement of Diseases from the Decumbiture of the Sick* (London: Nath. Brookes, 1655; undated reprint by Ascella (London) consulted), p.7. Thanks to Deborah Houlding for this reference.

times in the works of the influential astrologer Alan Leo (1860 – 1917).¹¹⁵ Writing in 1913, Leo characterised it as ‘the well-known Hermetic maxim’ and it has continued to be widely recognised. For instance in 1988 the astrologer Liz Greene stated:

This Hermetic World-view is familiar to all astrologers who have studied the antecedents of their art... You can find this same perspective in many astrological texts of the 20th century, because the schools of Theosophy, Rudolf Steiner, Alice Bailey et al. have retained the old Hermetic vision of reality.¹¹⁶

Bernadette Brady, writing for astrologers in 1992, remarked that “‘As above, so below,’ is a statement we all know” and the astrologer Diana Collis, discussing the principle behind astrology, remarked: “Most people encapsulate it in the, these days, rather hackneyed term “as above so below”.”¹¹⁷ The axiomatic nature of ‘as above, so below’ for astrology is also recognised by astrology’s critics – as when, for instance, Dean et al used the phrase to summarise the ‘fundamental claim of astrology’.¹¹⁸

The four words ‘as above, so below’ are often quoted as if they were a complete articulation of the Emerald Tablet’s statement on this point, and this formulation could be interpreted to imply a simple causal relationship from heavens to Earth.¹¹⁹ The full phrase as cited earlier in this sub-section (‘That which is above is like to that which is below, and that which is below is like to that which is above, to accomplish the miracles of one thing’) makes it clear that a *participatory* relationship is being described – as Robert Hand pointed out, according to this description ‘...we not only get created – we *create*’.¹²⁰ The experiential consequence of this participatory relationship for a

¹¹⁵ E.g. H.P. Blavatsky, *Isis Unveiled*, (Pasadena: Theosophical University Press, facsimile of 1877 edition, 1977) Vol.1 pp.35, 294, 306, 330, 427; H.P. Blavatsky, *The Secret Doctrine* (Pasadena: Theosophical University Press, facsimile of 1888 edition, 1982), Vol.1 pp. 177, 274, 369; Vol.2 pp.139, 502, 699, 700. Thanks to Kim Farnell for these references. E.g. Alan Leo, *How to Judge a Nativity* (2nd edn.) (London: L.N. Fowler, 1908) p.12; Alan Leo, *Esoteric Astrology* (London: L.N. Fowler, 1913), p.122. Thanks to Kirk Little and the late Maurice McCann for these references.

¹¹⁶ Liz Greene, ‘Alchemical Symbolism in the Horoscope’ in: Liz Greene and Howard Sasportas, *Dynamics of the Unconscious* (London: Arkana, 1988) p.260.

¹¹⁷ Bernadette Brady, *The Eagle and the Lark – A Textbook of Predictive Astrology* (York Beach, Maine, Samuel Weiser: 1992), p.101. Diana Collis, interview, 2011.

¹¹⁸ Kelly, Dean and Saklofske, *Astrology: Critical Review*, p.51.

¹¹⁹ For instance Leo only quoted the first four words, as for the most part did Blavatsky – though she added ‘and vice-versa’ at Blavatsky, *Secret Doctrine*, p. 369.

¹²⁰ Steele and Waley Singer, ‘The Emerald Table’, p. 42; Hand quoted in Phillipson, *Astrology Year Zero*, p.186

practising astrologer can be illustrated by the following from the contemporary astrologer Adrian Duncan:

The astrologer maintains that there is a natural resonance between the evolving motion of the universe, and the development of the human soul. This is a very effective working hypothesis, and the astrologer who puts doubts about its effectivity aside and embraces the hypothesis wholeheartedly is rewarded by this intelligent universe. The clinical and objective approach of the sceptic will lead to very poor results in the interpretation process, whilst the enthusiastic believer will find himself in dialogue with a supportive universe, magically geared to his development.¹²¹

In similar vein, Campion wrote:

judicial astrology doesn't work; it's astrologers who work. In this sense the horoscope usually functions as an ink blot on to which we project our ability to analyse human character and impart meaning to human situations. However, and this is a very big *however*, there is something out there. Astrology is like a game of chess with an invisible partner. We set out the board and the rules, make a move, and then find that the pieces are moving themselves, as if by an invisible hand.¹²²

These quotations convey something of the sense of divinatory astrology as dialogical – ‘a dialogue with the unknown’ or ‘dialogue with the divine’ as Curry has characterised it, whilst acknowledging the influence of Cornelius and Hyde on this aspect of his thought.¹²³

Obscurity in both the origins of the Emerald Tablet and the intentions of its author(s) have been cited by Arthur Mather as reasons to question the idea of the macrocosm-microcosm principle as something that would be relevant to astrology.¹²⁴ The charge of obscurity is undeniable. The first known version of the text dates to an Arabic version in 934 CE, but this is widely thought to have been a translation of an earlier, lost, Greek

¹²¹ Adrian Duncan, ‘Is Astrology Reality?’ [1999] <https://www.astrowow.com/blog/is-astrology-reality/> (accessed 18th August 2019).

¹²² Nicholas Campion, ‘Mythical Moments in the Rectification of History’ in: Noel Tyl (ed.), *Astrology Looks at History* (St Paul MN: Llewellyn Publications, 1995), p.47.

¹²³ Curry in: Willis and Curry, *Astrology Science Culture*, p. 12, p. 23.

¹²⁴ Arthur Mather, ‘Modern Science, Epistemology and Astrology: Following up on Garry Phillipson’s challenging article’, *Correlation* 26 (1) 2008, p. 54.

version.¹²⁵ Needham's argument that the text may derive from Taoist literature is a minority position, but regardless of its historical veracity it emphasises the conceptual congruence between macrocosm-microcosm thought and Taoism.¹²⁶ It thus underscores Jung's invocation of both as precedents for synchronicity. That suggestion is echoed by Seyyed Hossein Nasr's remarks that macrocosm-microcosm ideas 'are universal and far from being limited to Greek, Islamic, or Christian cosmologies, [having] their exact counterparts in China, India, and elsewhere.'¹²⁷ Congruence of ideas does not establish their veracity however, and the charge of obscurantism by critics remains as a major element in the failure of dialogue between astrologers and their critics.

2.5 Failure of Dialogue

The failure of dialogue between astrologers and their critics involves suspicions of bias on both sides. Writing in 1961, Rudhyar suggested that people whose minds were 'conditioned by the type of "rigorous thinking"... which is the ideal of modern science will find such a thinking (as, for instance, the correspondence of microcosm and macrocosm) obscure, archaic and unconvincing.'¹²⁸ In similar vein, Cornelius suggested that 'divination's epistemological claim to truth... is almost impossible for modern educated opinion to countenance'¹²⁹ On the side of the critics, Culver and Ianna asserted (without substantiation) that 'practitioners [of astrology] have almost never done science, have almost never learned to depend on objective evidence or to use experimental methods of verification to make observations to confirm ideas.'¹³⁰ Belief in astrology was therefore, in their view, due to the preference of astrologers and their clients for a comforting illusion over the harsh reality exposed by scientific enquiry. Writing in 1977, Dean et al argued that in investigating astrology, 'there is an especial

¹²⁵ Florian Ebeling, David Lorton (tr.), *The Secret History of Hermes Trismegistus* (Ithaca, Cornell University Press, 2007 [2005]), pp.49-50; Antoine Faivre, 'Hermetic Literature IV: Renaissance – Present' in Wouter J. Hanegraaff (ed.), *Dictionary of Gnosis & Western Esotericism* (Leiden: Brill, 2006), pp.536-7.

¹²⁶ Joseph Needham, *Science and Civilisation in China (Volume 5)*, (Cambridge University Press, 1980) p.370-2.

¹²⁷ Seyyed Hossein Nasr, *An Introduction to Islamic Cosmological Doctrines* (State University of New York: 1993) p.66.

¹²⁸ Dane Rudhyar, 'How Can Astrology's Claims be Proven Valid', *The Aquarian Agent* (issue 1.10, 1970) p. 5. Originally published in *Insearch* (Spring 1961); www.cosmocritic.com/pdfs/Rudhyar_Dane_How_Can_Astrologys_Claims.pdf (accessed 17th August 2019) p. 5.

¹²⁹ Cornelius, Field of Omens, abstract (page not numbered).

¹³⁰ Culver and Ianna, *Astrology: True or False*, pp. 220 – 1.

need for scepticism, method, thoroughness and competence. Yet the opposite situation prevails [...] As a result astrology is permeated by fog.’¹³¹ Since then, Dean et al seem to have come to regard at least some astrologers as culpable for this state of affairs. Already in 1979, Mather wrote that ‘Some astrologers... fearing that science was catching up with them, have backtracked very rapidly, creating a smokescreen of symbolism, inner reality, holistic understanding, etc.’¹³² Mather’s statement was cited as fact ten years later by Kelly, Culver, Lopton.¹³³ And when I interviewed Dean et al in 2000 the view that the obfuscation was smokescreen rather than fog – something for which astrologers were therefore more or less responsible – was asserted with reference to Kuhn:

the philosopher Thomas Kuhn noted that when an idea is in crisis, its supporters retreat behind a smokescreen of speculation that sounds good but is actually empty. This is precisely the situation with modern astrology. Rather than demonstrate their claims under artifact-free conditions, or specify what research would be relevant or how controversies and disagreements might be dealt with, astrologers retreat behind a smokescreen of speculation about the nature of truth, reality, perception, language, and so on. Talk yes, actual progress no.¹³⁴

The change from ‘fog’ to ‘smokescreen’ could then be taken as an index of increasing pessimism regarding astrology’s claims to truth on the part of this group. In 1977 Dean had written, ‘The picture emerging suggests that astrology works, but seldom in the way or to the extent that it is said to work.’¹³⁵ And in 1979 Mather had written, ‘The net result of our assessment is that several areas of traditional astrology appear to be valid, or at least strongly merit further investigation [although] with many areas... the evidence is against their validity.’¹³⁶ These statements seemed to give some cause, albeit heavily qualified, for optimism regarding scientific vindication of some part of astrology. By

¹³¹ Dean et al, *Recent Advances*, pp. 15 - 16.

¹³² Arthur Mather, Response to a review of Dean et al, *Recent Advances*, by Malcolm Dean in *The Zetetic Scholar* Nos. 3 & 4 (1979) p. 106. Cited in: Ivan W. Kelly, Roger Culver, Peter J. Lopton, ‘Astrology and science: an examination of the evidence’ in S. K. Biswas, D. C. V. Mallik, C. V. Vishveshwara, *Cosmic Perspectives: Essays dedicated to the memory of M. K. V. Bappu* (Cambridge University Press, 1989) p. 223.

¹³³ Kelly, Culver and Lopton, ‘Astrology and science’, p. 223.

¹³⁴ Dean et al quoted in: Phillipson, *Astrology Year Zero*, p.152. The ‘smokescreen’ analogy was first used in this context by Arthur Mather, in his response to Malcolm Dean’s critique of Dean et al’s *Recent Advances* in ‘Astrology: a Review Symposium’ in *The Zetetic Scholar* Nos. 3 & 4 (1979) p. 106. This was subsequently cited by Kelly, Culver and Lopton, ‘Astrology and Science’, p.223.

¹³⁵ Dean et al, *Recent Advances*, p.7.

¹³⁶ Mather, response to Malcolm Dean in *Zetetic Scholar* Nos. 3 & 4, p.104.

2008, however, the verdict was that ‘The evidence that led to *Recent Advances* consisted essentially of promising results from uncontrolled studies; but subsequently none have been shown to give positive results when artifacts are controlled.’¹³⁷

Two issues need to be distinguished here. The first is the judgement that scientific tests of astrology have failed to show any truth in astrology; discussion of this will follow, particularly in chapters 4 and 5. The second issue is the conclusion that, science having delivered a negative verdict, there is nothing further to be said about astrology’s truth-status – so that any philosophical discussion of the issues can and should be seen as ‘a smokescreen of speculation’.¹³⁸

2.5.1 Kinds of Truth

A key issue, therefore, is whether scientifically-sanctioned truth is the only kind of truth that should be considered in evaluating the truth-status of astrology. It is central to Cornelius’s approach that it is not, as is seen in his argument that ‘Geoffrey Dean commits the basic philosophical error of scientism, which is to assert or imply that there can be logically only one class of truth...’¹³⁹ Rudhyar put forward a similar perspective in a review he wrote of Dean and Mather’s *Recent Advances*. He argued that the book was flawed ‘because it starts from a black-and-white, either-or opposition between “truth” (defined as objective and exact knowledge based on scientific research) and “belief”’.¹⁴⁰ Further, he argued:

The writers of the book (and probably most astrologers occupied with statistical research) seem to have a Newtonian idea of the universe. On page 2 they dispose summarily of the holistic approach which nevertheless is the foundation of the most recent physical theories in which the universe is shown to be a web of relationships, and all separate objects -- including even atomic particles -- are taken to be nothing but patterns of relationships.¹⁴¹

¹³⁷ Geoffrey Dean, Ivan Kelly, and Arthur Mather – Interview, 2008.

¹³⁸ Dean et al quoted in: Phillipson, *Astrology Year Zero*, p. 152 (already cited above).

¹³⁹ Cornelius, *Moment of Astrology*, p.189.

¹⁴⁰ Dane Rudhyar, review of Dean et al, *Recent Advances*, in ‘Astrology: A Review Symposium’, *Zetetic Scholar* Nos. 3 & 4, April 1979, p. 83.

¹⁴¹ Rudhyar, review of *Recent Advances*, *Zetetic Scholar* Nos. 3 & 4, April 1979, p. 83.

In response, Dean and Mather characterised Rudhyar's approach as a rejection of science – and therefore of truth: 'In a nutshell Rudhyar rejects science (and hence our book) in favor of symbolism, and hence accepts belief in lieu of truth.'¹⁴²

A similar argument arose regarding an article, 'The Truth of Astrology', by the psychotherapist and astrologer Mike Harding.¹⁴³ Harding distinguished between 'computational truth' – truth which can be arrived at by 'deciding to sit down and think about it' – and 'meditative truth', in which truth reveals itself, and 'I cannot control what the world may or may not reveal.'¹⁴⁴ This distinction will be further discussed in chapter 3. For the present discussion, the significant issue is Harding's suggestion that a mode of truth other than the scientific should be taken into account when astrology's truth-status is discussed. Harding's article was not well-received by Dean, who suggested that Harding 'implies that, when faced with the Emperor's New Clothes, it is best to keep our heads in the sand... Harding's prize-winning essay abandons scholarship and clear thinking in favour of muddle and misrepresentation'.¹⁴⁵ Harding replied, 'it is clear that Dean has little, if any understanding of either linguistic or Continental philosophy, (or possibly even recognises what can be meant by 'philosophy'...)' and suggested that Dean 'seems, almost wilfully, to misunderstand or misrepresent points being made in a manner described by Wittgenstein's concept of "aspect blindness".'¹⁴⁶ (For Wittgenstein, 'Aspect-blindness will be *akin* to the lack of a "musical ear".'¹⁴⁷) This led him to question whether Dean's evaluations of astrological research were trustworthy.¹⁴⁸ The exchange exemplifies both a failure of dialogue between astrology's advocates and critics, and the central role played in that failure by disagreement over whether it is valid to consider a mode of truth that is not defined by science in the sense established above.

¹⁴² Dean and Mather, 'Response to Mr. Rudhyar' in 'Astrology: a Review Symposium', *Zetetic Scholar* Nos. 3 & 4, April 1979, p. 98.

¹⁴³ Mike Harding, 'The Truth of Astrology' *The Astrological Journal* Vol. 39 No. 6, Nov/Dec 1997 pp. 14 – 18.

¹⁴⁴ Harding, 'Truth of Astrology', p. 15.

¹⁴⁵ Geoffrey Dean, 'The Truth of Astrology Competition: A summary of each entry, and some implications for researchers' *Correlation* Vol. 16 No. 2, Northern Winter 1997/8 p. 56. Harding's essay had won the competition.

¹⁴⁶ Mike Harding, 'Dean has no understanding of either linguistic or continental philosophy' (letter), *Correlation*, Letter Vol. 17 No. 1, Northern Summer 1998, p. 54.

¹⁴⁷ Ludwig Wittgenstein, G. E. M. Anscombe (tr.), *Philosophical Investigations (The German text, with a revised English translation)* 3rd edn. (Malden: Blackwell, 2001 [1953]) p. 182. Original emphasis.

¹⁴⁸ Mike Harding, 'Dean has no understanding...', p. 56.

Accounts of a non-scientific kind of truth, by their nature, define a truth which cannot be tested and demonstrated objectively; it is to that extent obscure. This obscurity is generally acknowledged by astrologers who argue for such a position. For example, Rudhyar wrote: ‘The transpersonal philosopher-astrologer should always allow for the existence of the unknowable. He is dealing with a mystery – with man’s essential freedom...’¹⁴⁹ Cornelius took a similar position. Towards the close of his book *The Moment of Astrology*, he remarked that he had not attempted to set out ‘a comprehensive and definitive theory of astrology’, suggesting that the theoretical constructions he has used throughout the book ‘are better seen as stepping-stones rather than resting places.’¹⁵⁰ This is, in his view, an inevitable consequence of the view of astrology as divination: ‘Reorienting astrology as divination leads to a realm of uncertainty with few signposts to guide us.’¹⁵¹ For Harding, meditative truths ‘may... lie outside of speech. They can be pointed to, they can be shown in the world, but they cannot actually be described in words. Sometimes they show themselves only in silence...’¹⁵² Such arguments are often seen by critics as examples of the ‘smokescreen’ they allege astrologers to create around their subject. As was seen to be the case with Culver and Ianna, Dean et al have also argued that there is no valid argument for precluding astrology-as-divination from assessment by scientific testing. Thus when I put it to Dean et al that some astrologers regard astrology as not testable because ‘they see it as a divinatory tool more akin to a ritual that prepares the mind to intuit what needs to be said’, their perspective was that this was ‘hard to understand’, and that – properly seen – the issue was ‘whether the astrology ritual works better than a control ritual, e.g. by providing new information or by improving self-esteem. Much is testable here.’¹⁵³ The point was underscored when Dean, in a paper about astrology and divination, argued of the body of scientific tests of astrology, ‘not only do the results deny genuine astrological effects... they also deny god-dependent effects (so divination is fantasy).’¹⁵⁴ The possibility that astrology-as-divination might be true in a way that

¹⁴⁹ Rudhyar, *Humanistic to Transpersonal*, p. 65.

¹⁵⁰ Cornelius, *Moment of Astrology*, p.303.

¹⁵¹ Cornelius, *Moment of Astrology*, p.277.

¹⁵² Harding, ‘Truth of Astrology’, p. 15.

¹⁵³ Dean et al quoted in: Phillipson, *Astrology Year Zero*, p. 143.

¹⁵⁴ Geoffrey Dean, ‘Divination: Astrology shows clear links with divinatory practices (2010), <http://www.astrology-and-science.com/A-divi2.htm> (accessed 18th August 2019).

could not be captured through the methodology of science was dismissed because ‘untestable gods are... indistinguishable from fantasy.’¹⁵⁵

2.5.2 The Nomothetic/Idiographic Distinction Revisited

In order to add context to this discussion I return to the distinction between nomothetic and idiographic approaches discussed in the first chapter. The position of Dean et al regarding astrology is that nomothetic (law-based) evidence should be the only arbiter of truth. In their view, idiographic (private/unique) evidence may hold significance or meaning for the individual – this will be explored further in this section – but they see this as having no relevance to astrology’s truth-status. This conflicts with Cornelius’s advocacy of the ‘unique case’, under which the individual perspective of the astrologer is integral to the understanding of astrology’s truth-status. A parallel for this conflict may be seen in the observation of John Swinton and Harriet Mowat (professor of practical theology and research fellow in spirituality, respectively) that:

nomothetic knowledge as it is embodied in the language and practices of science has become the public currency for knowledge and the verification of what is true and what is untrue. However, the fact that there are powerful forces within culture pushing for the supremacy of nomothetic knowledge does not make nomothetic knowledge the only plausible form of knowledge (although it may often look that way).¹⁵⁶

Swinton and Mowat used the example of a scientist’s love for his wife to illustrate the two forms of knowledge. Hence, ‘within his professional life, the scientist defines fact and truth in terms of replicability, falsifiability and generalizability’ – the nomothetic model.¹⁵⁷ The scientist loves his wife and children, and believes it is true that he loves them, but,

It is not possible for him to carry out a randomized control trial to test the theory and, even if he did, the love he shows for his wife and family would more than probably be quite different from

¹⁵⁵ Dean, ‘Divination’.

¹⁵⁶ Swinton and Mowat, *Practical Theology*, p. 40.

¹⁵⁷ Swinton and Mowat, *Practical Theology*, p. 40.

the love a stranger might show towards them, or even the love that he has showed them earlier on in their relationship.¹⁵⁸

It is possible to see, in the nomothetic/idiographic distinction, precedent and support for the idea that astrology-as-divination might not conform to scientific criteria for truth, yet might be judged true under a different set of criteria. Hence for example Curry made it clear that he regarded astrology-as-divination's truth-status as precisely *not* a matter for nomothetic evaluation. He argued that in tests of astrology as understood by Dean et al, 'the claims at stake must be systemic, abstract, nomothetic ones. But this would rule out just the kind of contextual, situated, embodied and embedded interventions of which astrology as divination consists.'¹⁵⁹

Dean et al have drawn a distinction between 'subjective and objective astrology' that is relevant here.¹⁶⁰ According to their characterisation, 'subjective astrology' might bring direction, purpose and enrichment to people's lives; yet, '*To be accepted, subjective astrology does not need to be true.*'¹⁶¹ 'Objective astrology', on the other hand, was characterised as something that 'needs to be true'.¹⁶² A similar view of astrology was outlined by Culver and Ianna: 'astrology seems to work for purely psychological reasons only... Just as taking a harmless sugar pill may "cure" an illness if you think you are taking the proper drug, believing astrology works may lead to a beneficial good feeling in the client.'¹⁶³ (The analogy in that quotation, between astrology and a placebo, will be discussed in chapter 7 of this thesis.) A feature of Dean et al's distinction between subjective and objective astrology is that it accommodates the common experience, referred to above, that astrology works – or at least, seems to work. This perspective is illustrated in an article by one of Dean's collaborators, Rudolf Smit, who described how he learned and practised astrology, but eventually decided on the basis of scientific evaluation that there was no truth in the subject.¹⁶⁴ After a long

¹⁵⁸ Swinton and Mowat, *Practical Theology*, p. 41.

¹⁵⁹ Curry in: Willis and Curry, *Astrology Science Culture*, pp. 96 -7.

¹⁶⁰ Dean et al in: Phillipson, *Astrology Year Zero*, p.128; pp. 128 – 130 for the discussion of subjective and objective astrology.

¹⁶¹ Dean et al quoted in: Phillipson, *Astrology Year Zero*, p.129. Original emphasis.

¹⁶² Dean et al quoted in: Phillipson, *Astrology Year Zero*, p. 129.

¹⁶³ Culver and Ianna, *Astrology: True or False*, p. 220. They cited parts 1 and 2 of: Dean, 'Does Astrology Need to Be True'.

¹⁶⁴ Rudolf Smit, 'Astrology my passion: My life, my personal disaster' (undated), <http://www.astrology-and-science.com/a-pass2.htm> (accessed 16th June 2015).

period of not practising astrology, he wrote that he was again using astrology, but in a way that would fit a ‘subjective astrology’ interpretation:

As for me, after twenty odd years I have taken up again the reading of charts (now and then, that is), if only to experience again the wonderful feeling when such a reading turns out to be successful. However, I am not asking money for such sessions, and I tell my new "clients" in advance that I am offering them a Grand Illusion, which may be helpful nonetheless. If it is helpful, it is not because astrology itself is helpful, but because astrology sets a scene that helps me to be helpful.¹⁶⁵

At this point there is almost the basis for a *rapprochement* between some critics of astrology and advocates of astrology-as-divination. Both deny causal power to the planets – at least, power of sufficient strength to explain how most astrology could work. Both characterise astrology as a potentially useful tool, and emphasise the need for subjective engagement and reference to astrological technique and interpretive precedent *as if* it were an objective, causally-based science. Yet the answer to Culver and Ianna’s question, ‘Astrology: True or False?’ would be ‘true’ from one side and ‘false’ from the other.

2.6 Conclusion

The purpose of this chapter has been to chronicle some key arguments and texts pertaining to the truth-status of astrology, and to show what I mean by a ‘failure of discussion’ between the parties to this discussion. If the overall impression is of a maelstrom of incompatible ideas, which might benefit from philosophical analysis, it has therefore succeeded. The basis for a philosophical analysis will be considered in the following chapter, chapter 3.

The main issues to arise are as follows. Firstly, there is the question of whether or not it makes sense, in principle, to speak of more than one kind of truth. Closely related to this is the question of science’s role in the evaluation of astrology’s truth: advocates of science as the arbiter of astrology’s truth often assume that, absent scientific validation,

¹⁶⁵ Smit, ‘Astrology my passion’.

astrology would necessarily be untrue; that there simply could be no other way for it to be true.

An attempt to save the phenomenon wherein astrology *seems* to work, whilst keeping the subject segregated from ‘truth’, is the idea from Dean et al of a ‘subjective astrology’ which might be helpful even though not true. The characterisation of subjectivity here is controversial, with different understandings evident between many of those who regard astrology as true, and those who do not. For the former group, the subjective consciousness of the individual is capable of tapping into something beyond the individual – as described by the principle of microcosm-macrocosm relationship. Critics of astrology, on the other hand, typically assume that such a relationship is either not possible, or at any rate not relevant to astrology.

All of the positions in this chapter rest upon epistemological and ontological assumptions that are seldom mentioned, or even noticed, by those who espouse them. My contention is that by bringing these assumptions into plain view, it may be possible to move beyond the failure of dialogue that currently characterises the field. The central question here is how truth should be defined and applied. A literature review of the philosophical concepts and sources to be deployed constitutes the following chapter.

Chapter 3: Literature Review – Philosophy

3.1 The Role of Philosophy

This chapter will define the conceptual framework that will be taken from philosophy to shed light on astrology's truth-status. In broad terms, the approach is along the lines delineated by Richard Fumerton, albeit applied to astrology:

If you tell me confidently that there is a God, or that the CIA assassinated Kennedy, I'll want to know how you know that that is so. I'll want some reasons or justification for believing that it is true. I'll want to know why you think that this is something a rational person ought to believe. It's this fact about our pursuit of truth that makes plausible the claim that one simply cannot ignore epistemology...¹

Epistemology is 'that branch of philosophy concerned with the nature of knowledge, its possibility, scope, and general basis.'² The term was introduced in 1854 by James F. Ferrier (1808 – 1864), and is equivalent to terms such as 'theory of knowledge' and 'problem of knowledge'.³

It began to emerge in the previous chapter that it is not clear how 'truth' should be characterised, nor what is really being said, and implied, when astrology is characterised as either true or false. Hence the involvement of epistemology and, in particular, theories of truth. Jamin Asay wrote that 'a theory of the nature of truth will offer an account of what it is, if anything, that is shared by all truths, in virtue of which they are true.'⁴ This is to the point: in order to evaluate the truth-status of astrology, it is first necessary to arrive at a degree of clarity as to what the proposition 'astrology is true' (or false) would mean. The definition of truth is a contentious issue for philosophers and any aspiration to final clarity should be tempered by that fact.

After preliminary discussion and orientation, section 3.1.5 below (including its sub-sections) will focus on the three major theories of truth. These sections aim to introduce

¹ Richard Fumerton, *Epistemology* (Malden, MA: Blackwell, 2006) p. 2.

² D. W. Hamlyn, 'History of Epistemology' in Honderich (1995), P. 242.

³ Jan Woleński, 'The History of Epistemology' in Ilkka Niiniluoto, Matti Sintonen and Jan Woleński, *Handbook of Epistemology* (Dordrecht: Kluwer, 2004) p. 3; James E. Ferrier, *Institutes of Metaphysic: The Theory of Knowing and Being* (Edinburgh: William Blackwood and Sons, 1854); term introduced at p. 46.

⁴ Jamin Asay, *The Primitivist Theory of Truth* (Cambridge: Cambridge University Press, 2013) p. 12.

the theories in as simple and concise a manner as possible, and therefore include very little discussion of their relevance to astrology, or of the criticisms that each theory has faced. The theories will be looked at in detail in chapters 4 – 7, where more discussion of these issues will be found. In section 3.1 – roughly the first half of this chapter – the discussion is kept relatively simple in order to establish an overview of the main philosophical concepts. Section 3.2 – roughly the second half of this chapter – will then consider some of the challenges and complications faced by the simple account given up to that point, and the approach that will be taken towards them.

The terms ‘truth’ and ‘knowledge’ have both been used already in this chapter. In section 3.1.4 below I will argue that inevitably, in discussing the truth of astrology, one is also discussing whether astrology yields knowledge; that a true astrology would yield knowledge, and that it only makes sense to speak of astrology yielding knowledge if astrology is in a significant sense true. Before pursuing this, or any other issue, however it is apposite – given this thesis’s focus on applying philosophical concepts to astrology – to review the discussion of astrology in recent books on philosophy.

3.1.1 Astrology as it has appeared in Recent Philosophy Texts

Geoffrey Cornelius wrote:

It seems fair to say that there is *no* established academic philosopher who seriously raises as a primary epistemological question the possibility of truth-telling through practical inductive divination - astrology, Tarot cards, tea leaves and the like.⁵

In my review of the philosophical literature I have not found a disproof of this assertion, and have found many examples of astrology being dismissed out of hand in philosophical texts. Indeed astrology quite often serves as a touchstone for falsehood, with no significant latitude for discussion of its truth-status. Thus for instance Peter Van Inwagen suggested that “it is hardly possible to suppose that there could be a very *interesting* debate about the truth-values of the claims made by astrologers.”⁶ For him, ‘It is clear... that someone who believes in astrology believes in something that is

⁵ Cornelius, *Field of Omens*, p. 8. Original emphasis.

⁶ Peter van Inwagen, “‘It Is Wrong, Everywhere, Always, and for Anyone to Believe Anything upon Insufficient Evidence’”, Jeff Jordan and Daniel Howard-Snyder (eds.) *Faith, Freedom and Rationality: Philosophy of Religion Today* (Lanham Md.: Rowman & Littlefield, 1996) p. 142.

simply indefensible.’⁷ Van Inwagen’s focus was not astrology; he simply used it as convenient shorthand for something that is definitely not true.

Joshua Gert credited philosophers with particular insight into astrology when he wrote, ‘It is not very mysterious that we human beings go in for astrology. But it is not very controversial amongst philosophers that astrology is simply bogus: that our best philosophical theory of astrology would be an error theory.’⁸ Richard L Kirkham attributed the alleged knowledge of astrology’s falsity to the general populace when he wrote that ‘Most of us are skeptics about the predictions of astrology; that is, we think that these predictions are no more objectively justified than their negations.’⁹ Given the data (already referred to in chapter 1) that suggests belief in astrology in the West may be as high as 70%, astrology may not be the best example he could have chosen.¹⁰ Joseph Tolliver offered what appears to be a more detailed analysis of the inherent problem with astrology. He took the example of a hypothetical astrologer arguing that the fact of Einstein being a Pisces explained his discovery of relativity.¹¹ This is something that astrologers have said, albeit usually with caveats and conditions.¹² In algebraic notation he characterised Einstein’s discovery of relativity as d ; the fact of his being a Pisces as e ; and the hypothetical astrologer’s reasons for their view as r . With this notation in place he announced: ‘But of course, r is a bad reason to believe that e is a good reason to believe d .’¹³ The formulation is more complex, but the substance remains the same – an assumption that there could not be such a thing as a good reason to believe in astrology.

In some cases, philosophers have emphasised the role of science in revealing astrology not to be true. Thus for instance Bertrand Russell (1872 – 1970) wrote, ‘To any person with even the vaguest idea of the nature of scientific evidence, such beliefs as those of

⁷ Inwagen, ‘‘It Is Wrong...’ p. 141.

⁸ Joshua Gert, *Normative Bedrock: Response-Dependence, Rationality, and Reasons* (Oxford: Oxford University Press, 2012) p.16.

⁹ Richard L. Kirkham, *Theories of Truth* (Cambridge, Mass: The MIT Press, 1995) p.41.

¹⁰ Campion, *Astrology and Popular Religion*, p. 160.

¹¹ Joseph Thomas Tolliver, ‘The St. Elizabethan World’ in John W. Bender (ed.), *The Current State of the Coherence Theory: Critical Essays on the Epistemic Theories of Keith Lehrer and Laurence Bonjour, with Replies* (Dordrecht: Kluwer, 1989) p. 164.

¹² E.g. Liz Greene, *Astrology for Lovers* (San Francisco CA: Weiser, 2008 [1989]) p. 344; Jenni Kosarin, *The Everything Astrology Book: Follow the stars to find love, success, and happiness!* (2nd edn.) (Avon, Mass: Adams Media, 2006 [1999]) p. 51.

¹³ Tolliver, ‘St. Elizabethan World’, p. 164.

astrologers are of course impossible.’¹⁴ In similar vein, Reuben Abel (1912 – 1997) posited a dichotomy whereby astrology was ‘nonsense’ because it was not ‘scientific’, and asserted that ‘the claims of astrology are not knowledge.’¹⁵ This quotation appeared as the epigraph of Kelly, Dean and Saklofske’s ‘Astrology: A Critical Review’ in 1990.¹⁶ W. V. Quine (1908 – 2000) took a position similar to that of Abel when he asserted that ‘Science tells us that our only source of information about the external world is through the impact of light rays and molecules upon our sensory surfaces.’¹⁷ He concluded, therefore, that ‘the epistemological question is in turn a question within science.’¹⁸ On that basis he asserted, ‘we should be wary of astrologers, palmists, and other soothsayers’.¹⁹

Mark Risjord gave an historical perspective to what he saw as astrology’s negative truth-status when he wrote that ‘Alchemy and astrology were once proclaimed “sciences”, but nobody now takes their theories as knowledge’, while James Tartaglia posited a continuum of knowledge: ‘if we take experience as the foundation of knowledge, then we may rank science at the top of the cultural pecking order, astrology at the bottom, and Freudian psychoanalysis somewhere in between.’²⁰

3.1.2 Positivism

The idea of a hierarchy of knowledge of the type advocated by Tartaglia belongs in the tradition of positivism, typically traced back to Auguste Comte (1798 – 1857). Comte envisaged the human mind moving through an evolutionary process in which it ‘passes successively through three different theoretical conditions: the Theological, or fictitious; the Metaphysical, or abstract; and the Scientific, or positive’, with each stage

¹⁴ Bertrand Russell, ‘On Astrologers’ in *Mortals and Others, Volume I: American Essays 1931 – 1935* (Oxford: Routledge, 1975) p.125 (first published in the Hearst Newspapers, 28th September 1932)

¹⁵ Abel, *Man is the Measure* p. 126; p. 23.

¹⁶ Kelly, Dean, Saklofske, ‘Astrology: A Critical Review’ p. 51.

¹⁷ W. V. Quine, ‘The Nature of Natural Knowledge’ in Samuel Guttenplan (ed.), *Mind and Language: Wolfson College Lectures 1974* (Oxford: Clarendon/Oxford University Press, 1975) p. 68.

¹⁸ W. V. Quine, *Theories and Things* (Cambridge, Mass: Belknap/Harvard University Press, 1981) p. 72. Quine identified his position with naturalism on the same page.

¹⁹ W. V. Quine, ‘Naturalism: Or, Living Within One’s Means’, *Dialectica* 49 (1995) p. 258.

²⁰ Mark Risjord, *Philosophy of Social Science* p. 7; James Tartaglia, *Rorty and the Mirror of Nature* (London: Routledge, 2007) pp. 16 – 17.

representing a step closer to truth and certainty.²¹ In the three stages, facts are understood respectively as the work of spiritual agents; in terms of powers, faculties or essences; and lastly in terms of empirical phenomena and the relations between them.²² H. B. Acton (1908 – 74) observed that this three-fold sequence is in effect a theory of knowledge.²³ It is a theory of knowledge under which religion and philosophy are superseded by science as final arbiter of truth. Further, it is an account in which the goal is certainty; discussing astronomy as a paradigm of science (and therefore of truth), Comte remarked that ‘Its whole progress... has been by introducing more and more certainty and precision into its predictions... *all science has prevision for its end* – an axiom that separates science from erudition’.²⁴

At the age of 80, Bertrand Russell looked back on the philosophical endeavours of his younger self and remarked: ‘I wanted certainty in the kind of way in which people want religious faith.’²⁵ This urge to stand on solid, certain, ground can lend the idea of reliance on scientific knowledge the status of a moral imperative. This can be seen in the statement of W.K. Clifford (1845 – 79) that ‘It is wrong always, everywhere, and for anyone, to believe anything upon insufficient evidence.’²⁶ The ramifications of this statement will be considered in chapter 7.

3.1.2.1 Relativism and Dogmatism

A corollary of the drive toward certainty is a desire to shun relativism, and a frequent concern arising from lowly estimations of astrology’s truth-status is that any consideration granted to it may unleash a destructive torrent of relativism. A terse definition of relativism in an epistemological context is that ‘The truth value of

²¹ Auguste Comte, Harriet Martineau (tr.), *The Positive Philosophy of Auguste Comte* Vol. 1 (London: George Bell & Sons, 1896) p. 2; and cf Auguste Comte, J. H. Bridges (tr.), *A General View of Positivism* (London: Trübner and Co, 1865 [1848/51]) pp. 9 – 12.

²² H. B. Acton, ‘Comte’s Positivism and the Science of Society’, *Philosophy* Vol. 26 No. 99 (Oct. 1951) p. 293; John Passmore, *A Hundred Years of Philosophy* (2nd edn.) (London: Gerald Duckworth, 1968 [1956]) p. 14.

²³ Acton, ‘Comte’s Positivism’, p. 303.

²⁴ Comte and Martineau, *Positive Philosophy* p. 152. Original emphasis.

²⁵ Bertrand Russell, *Portraits from Memory and Other Essays* (London: George Allen & Unwin, 1956) p. 53.

²⁶ W.K. Clifford, ‘The Ethics of Belief’ in Leslie Stephen and Frederick Pollock (eds.), *Lectures and Essays by the Late William Kingdon Clifford, F.R.S. Vol. II* (London: MacMillan and Co, 1879), p.186 (originally published in *Contemporary Review*, 1877).

propositions varies from person to person.’²⁷ Relativism is often traced back to the statement by the pre-Socratic philosopher Protagoras (c. 485 – 415 BCE) that ‘man is the measure of all things’, understood by Socrates to mean that ‘a thing is for any individual what it seems to him to be’.²⁸

The problem of astrology – taken as an agent of relativism – can be seen for instance in Simon Blackburn’s assertion:

Today’s relativists, persuading themselves that all opinions enjoy the same standing in the light of reason, take it as a green light to believe what they like... dogmatism feeds and flourishes on the desecrated corpse of reason. Astrology, prophecy, homeopathy... and a thousand other cults dominate people’s minds...²⁹

In similar vein, Larry Laudan presented a dialogue in which the ‘Relativist’ argued that science’s successes should not be surprising because, ‘As Feyerabend pointed out some years ago, it just stands to reason that if you have enough clever human beings engaged in any activity, it’s going to produce impressive results sooner or later.’³⁰ The dialogue continued with the ‘Positivist’ asking what impressive results ‘astrology, psychological research, or theology’ had to show; the ‘Relativist’ cited the popularity of horoscopes, and the ‘Positivist’ accused her or him of conflating popularity with ‘empirical success’.³¹

Paul Feyerabend (1924 – 94), to whom Laudan referred, has sometimes been cited as a defender of astrology against scientific attack.³² The reason for this is to be found in five pages of his *Science in a Free Society* in which he criticised the attack on

²⁷ Kirkham, *Theories of Truth*, p. 98.

²⁸ Plato, *Theaetetus* (tr. M. J. Levett, rev. Myles Burnyeat) in *Plato – Complete Works* (ed. John M. Cooper), p.179; 160d-e, 161c. The centrality of this statement to contemporary discussion of relativism is asserted by e.g. Steven D. Hales, *A Companion to Relativism* (Malden, MA: Wiley-Blackwell, 2011), p.1.

²⁹ Simon Blackburn, *Truth – A Guide*, (Oxford University Press, 2005) p.xiv; and cf. also pp.8, 34 & 196.

³⁰ Larry Laudan, *Science and Relativism: Some Key Controversies in the Philosophy of Science* (Chicago, IL: University of Chicago Press, 1990), p.168

³¹ Laudan, *Science and Relativism*, pp.168.

³² See for instance references to Feyerabend in: Patrice Guinard’s *Manifesto 3/4* at <http://cura.free.fr/10athem3.html#Ref110> (accessed 19th August 2019); Patrick Grim’s characterisation of Feyerabend as ‘among the opponents’ of individuals who are sceptical regarding ‘the occult’ (which he sees as including astrology) – Grim, ‘General Introduction’ in: Patrick Grim (ed.), *Philosophy of Science and the Occult* (2nd edn.) (Albany, NY: State University of New York, 1990), p.5; Jim Lewis’s characterisation of Feyerabend as being opposed to the ‘unquestioned dogmatism’ that prevents a proper investigation of astrology – Jim Lewis, ‘And the Future Will be Nothing Less Than the Flowering of Our Inwardness’ in A. T. Mann (ed.), *The Future of Astrology* (London: Unwin Hyman, 1987), p. 119.

astrologers contained in the ‘Statement of 186 Leading Scientists’ in the Sept/Oct 1975 *Humanist*.³³ Feyerabend cited evidence for the influence of solar flares upon life on Earth, and mentioned the sensitivity of oysters and potatoes to lunar rhythms.³⁴ Aside from such phenomena, however, he made it clear that his remarks ‘should not be interpreted as an attempt to defend...Modern astrology [which] inherited interesting and profound ideas, but it distorted them, and replaced them by caricatures more adapted to the limited understanding of its practitioners.’³⁵ And, later, he found it necessary to reiterate his lack of sympathy for astrology as currently practised, writing: ‘My use of examples from astrology should not be misunderstood. Astrology bores me to tears. However it was attacked by scientists, Nobel Prize winners among them, simply by a show of authority and in this respect deserved a defence.’³⁶

The extent of Feyerabend’s interest in astrology should not therefore be overstated. His discussion of astrology is best characterised as a means to the end of attacking authoritarian and objectivist tendencies in modern society, particularly from the scientific establishment – as seen in his assertion: ‘Science is one Ideology among many and should be separated from the State just as Religion is now separated from the State.’³⁷

It is certainly the case that some advocates of astrology have made statements which embody the ‘sinister challenge’ that, in the view of Richard Dawkins, is represented by relativism – ‘the view that scientific truth is only one kind of truth and it is not to be especially privileged.’³⁸ Thus for example the astrologer Liz Greene argued that ‘it is irrelevant to attempt to define astrology as “science” or “divination”, since both paradigms are expressions of the archetypal story-making function of the human psyche.’³⁹ Patrice Guinard argued that in the contemporary west, ‘Scientific ideology

³³ Paul Feyerabend, *Science in a Free Society* (London: New Left Books, 1978), pp.91 – 96.

³⁴ Feyerabend, *Science in a Free Society*, pp.93-4.

³⁵ Feyerabend, *Science in a Free Society*, p.96.

³⁶ Paul Feyerabend, *Three Dialogues on Knowledge* (Oxford: Blackwell, 1991), p.165.

³⁷ Feyerabend, *Science in a Free Society*, p. 106.

³⁸ Richard Dawkins quoted in James Randerson, ‘Dawkins’ Christmas Card List’, *The Guardian* 28th May 2007: <https://www.theguardian.com/commentisfree/2007/may/28/dawkinschristmascardlist> (accessed 8th August 2019)

³⁹ Liz Greene, ‘Is Astrology a Divinatory System?’, *Culture and Cosmos: A Journal of the History of Astrology and Cultural Astronomy* Vol. 12 No. 1 (Spring/Summer 2008) p. 28.

claims a monopoly on knowledge’, and went on to contend that, despite this, ‘scientific rationality is not more “objective” than Sumerian cosmology or Bantu mythology.’⁴⁰

Whether the issue is explicitly acknowledged or not, discussion of astrology’s truth-status is often accompanied by an undercurrent of concern that to cede any truth to astrology would be to open relativistic floodgates and see nonsense overwhelm and destroy the benefits of science, and western civilisation as we know it. This perceived threat can lead critics to advocate a dogmatic approach towards astrology. Such an argument was made by Saul Kripke: ‘sometimes the dogmatic strategy is a rational one. I myself have not read much defending astrology, necromancy and the like... Even when confronted with specific alleged evidence, I have sometimes ignored it although I did not know how to refute it.’⁴¹ Kripke’s conclusion was that it should be epistemology’s role ‘to delineate the cases when the dogmatic attitude is justified’ – raising the prospect that works such as this thesis may one day be consigned to an index of epistemologically proscribed works.⁴²

Cornelius’s assertion, cited at the beginning of this sub-section, seems to be substantiated therefore: there is little or no serious discussion by contemporary philosophers of the epistemological status of divination, or of astrology-as-divination. When astrology is mentioned at all, it is typically assumed that astrology-as-science would be the only viable explanatory model. The subject is often mentioned only as an emblem of falsehood and relativism, and sometimes with the implication – made explicit by Kripke – that it is acceptable and even necessary to dismiss astrology, and subjects like it, as ‘not true’ without evaluating them.

3.1.3 Truth in Philosophy

The pursuit of truth was seen as central to the quest for wisdom, even before the term *philosophia* (the love of wisdom) had been adopted by followers of Socrates in the late

⁴⁰ Patrice Guinard (tr. Matyas Becvarov), *Astrology: The Manifesto 1/4*. <http://cura.free.fr/07athem1.html> (checked 8th August 2019). The text is based on his doctoral thesis, *L’Astrologie: Fondements, Logique et Perspectives* (Paris, Sorbonne: 1993).

⁴¹ Saul A. Kripke, ‘On Two Paradoxes of Knowledge’ in *Philosophical Troubles: Collected Papers Volume 1* (Oxford University Press, 2011) p. 49.

⁴² Kripke, ‘On Two Paradoxes’, p. 49.

5th century BCE.⁴³ Thus for example the pre-Socratic philosopher Heraclitus (535 – 475 BCE) asserted that ‘Wisdom consists in speaking and acting the truth, giving heed to the nature of things.’⁴⁴ Socrates, in Plato’s account, stated that in order to become ‘a fine and good person’, the first prerequisite was ‘to be guided by the truth and always pursue it in every way’.⁴⁵ The quest for truth was not however a simple matter – something made clear in the parable of the cave, wherein the human condition was equated to that of prisoners, able only to see shadows cast by puppets manipulated by their captors: ‘the prisoners would in every way believe that the truth is nothing other than the shadows of those artifacts.’⁴⁶

Although the discussion of truth thus has ancient roots in philosophy, the search for the *essence* of truth is a relatively recent phenomenon in philosophy. As George Pitcher wrote,

The great philosophers of history... although they had something to say about this concept [truth], said surprisingly little: they were far more interested in truths than in ‘truth’. It was not until the end of the nineteenth century that the subject was discussed earnestly and with great thoroughness.⁴⁷

Thus although earlier philosophers will be mentioned in what follows, the primary discussion will be concerned with the period in which the nature of truth emerged as a contentious issue, and how the ideas from that period have subsequently been treated. In taking this approach I conform to the contemporary treatment of basic epistemology for, as Burgess and Burgess remarked:

In surveys of philosophical thought about truth one typically encounters early on a list of “theories” of truth represented by slogans loosely based on things that were said in a three-cornered debate over truth about a century ago, in which the realist insurgent Bertrand Russell

⁴³ Chronology from (e.g.) Gerald A. Press, ‘Plato’ in Richard H. Popkin, *The Columbia History of Western Philosophy* (New York: Columbia University Press, 1999) p. 35.

⁴⁴ Heraclitus in: Heraclitus, Philip Wheelwright (tr.), *Heraclitus* (Princeton University Press, 1959) p. 19, fragment 10.

⁴⁵ Plato; G. M. A. Grube, rev. C. D. C. Reeve (trs.), *Republic* in: Plato, John M. Cooper (ed.), *Plato: Complete Works* (Indianapolis, IN, Hackett, 1987) 489e – 490a p. 1112. Similar statement by Socrates about himself: Plato, Donald J. Zeyl (tr.), *Gorgias* in: Plato, John M. Cooper (ed.), *Plato: Complete Works* (Indianapolis, IN, Hackett, 1987) 526d-e p. 868.

⁴⁶ Plato, *Republic*, 515c, p. 1133.

⁴⁷ George Pitcher (ed.), *Truth* (Englewood Cliffs, NJ: Prentice-Hall, 1964) p. 1. Cited at: Engelbreten, *Bare Facts Naked Truth* p. 21. Similar statement at: Johnson, *Focusing on Truth*, p. 2.

attacked the dominant British idealism and American pragmatism of the day, as represented by the now-forgotten H. H. Joachim and the ever-famous William James.⁴⁸

The positions taken by Bertrand Russell (1872 – 1970), Harold H. Joachim (1868 – 1938) and William James (1842 – 1910) are known, respectively, as the correspondence theory of truth, the coherence theory of truth, and the pragmatic theory of truth. These were introduced briefly in chapter 1, and will be discussed more fully in sections 3.1.5.1 – 3.1.5.3 below. The three protagonists wrote numerous critiques of one another's positions regarding truth, and in addition there were personal connections between them: Joachim was a neighbour of the family of Russell, and gave the young Russell a reading list of philosophy books before he went to Cambridge university.⁴⁹ When Russell visited the USA in 1896, he stayed with William James.⁵⁰ And James conducted a lengthy philosophical correspondence with F. H. Bradley (1846 – 1924) – friend and colleague of, and primary influence upon, Joachim.⁵¹

3.1.4 What is it that would be True or False?

Although its general intent might seem clear, the involvement of the generalised term 'astrology' makes it unclear how the question 'astrology: true or false?' would be approached in a philosophical context. In particular, it is not clear what the *truth bearer* would be. The definition of 'truth bearer' is a matter of contention between philosophers but a broad definition is that it is 'an epistemological tool of which we can attribute the epistemic evaluation of being true.'⁵² Typical choices for truth bearer are: a proposition; a statement; or a belief. For the purposes of this thesis I will follow Scruton's argument that it does not matter greatly which of these is identified as the subject of a truth theory, for, 'If we can say what it is for a sentence to be true, then we

⁴⁸ Alexis G. Burgess & John P. Burgess, *Truth* (Princeton, NJ: Princeton University Press, 2011) pp. 2 – 3.

⁴⁹ Elizabeth Ramsden Eames, *Bertrand Russell's Dialogue with His Contemporaries* (Abingdon: Routledge, 2013 [1989]) p. 13.

⁵⁰ Bertrand Russell, John G. Slater (ed.) *Last Philosophical Testament* (London: Routledge, 1997) p. 185; also Eames p. 170.

⁵¹ T. L. S. Sprigge, *James and Bradley: American Truth and British Reality* (Chicago, IL.: Open Court, 1993).

⁵² Artur Rojszczak, Jan Woleński (ed.) *From the Act of Judging to the Sentence: The Problem of Truth Bearers from Bolzano to Tarski* (Dordrecht: Springer, 2005) p. 27. Also see this work, particularly ch. 2 (pp. 23 – 32) for the problems surrounding the term's definition.

can extend our theory to the proposition that it expresses, the statement that it makes, the belief that it identifies, and so on.’⁵³

As good an approach as any, therefore, is simply to focus on the proposition – “the abstract entity which captures what is *said* by a sentence, what is *believed* by a believer, what is *stated* by a statement, and so on.”⁵⁴ In recent epistemological texts, truth bearers are typically simple and uncontroversial propositions such as ‘snow is white’ or ‘dogs bark’.⁵⁵ This reflects a trend since the early twentieth century for epistemology to aim for an irrefutable definition of truth. At this point the problem with the formulation ‘astrology: true or false?’ in this context becomes clear. Astrology is not a proposition at all, let alone a simple one, and to that extent it is not clear how it would be either true or false.

The problem was identified by Curry in a discussion of a question very similar to ‘astrology: true or false?’. Commenting on the account by Dean et al of their having grappled with the question, ‘Was astrology true?’, Curry remarked:

This question is itself peculiar, as can be seen if we imagine equivalent alternatives: ‘Is science true?’ ‘Is art true? Or ‘Is religion true?’ It is very difficult to imagine how one could possibly arrive at an adequate response to such a sweeping and (as it is stated virtually without qualification) impossible demand.⁵⁶

He illustrated this approach on the part of Dean et al by citing the questions they proposed to take the discussion forward, such as, ‘Is it true that positive [zodiacal] signs are extraverted, that an elevated Neptune is musical, that adverse Mars transits indicate accidents...?’⁵⁷ The focus therefore was on the search for quantifiable, law-like, correlations between individual horoscopic factors and events in the world. By framing the discussion in this way, the view of astrology-as-science was being assumed in advance and to that extent the view of astrology-as-divination was precluded. Such an

⁵³ Roger Scruton, *Modern Philosophy* (London: Pimlico, 2004) p.99. Also see e.g. Ralph C S Walker, ‘Theories of Truth’ in Bob Hale & Crispin Wright (eds), *A Companion to the Philosophy of Language* (Oxford: Blackwell, 1997) p.309.

⁵⁴ Scruton 2004, p.99.

⁵⁵ Examples from Paul Horwich, ‘Theories of Truth’, p. 510.

⁵⁶ Curry in: Willis and Curry, *Astrology Science Culture*, p. 96, quoting Dean et al in: Phillipson, *Astrology Year Zero*, p. 124.

⁵⁷ Dean et al in: Phillipson, *Astrology Year Zero*, p. 127, cited by Curry in: Willis and Curry, *Astrology Science Culture*, p. 96.

approach would indeed be a fundamental problem given my intention, stated in chapter 1, to include both perspectives. The way beyond this potential impasse can be seen in the way Curry used ‘truth’ and ‘astrology’ together: in a critique of historical discussion of astrology he suggested that ‘The historian should have experienced, for him- or herself, the truth of astrology in action, in practice...’.⁵⁸ The reiteration ‘in action, in practice’ emphasises Curry’s position: from an astrology-as-divination perspective, what it would mean for astrology to be true would be no more or less than that specific astrological chart readings would be true.

Curry’s position is open to challenge, and in order to illustrate the issue here I will introduce an example of a horary chart reading by John Frawley:

an elderly woman had gone out wearing a valuable shawl; she had hung it up somewhere but forgotten where. The chart showed that it was in a French restaurant a couple of doors away from her house. This was without any indication that such a place existed or that she had even been to a restaurant.⁵⁹

In this case, therefore, there was an astrologically-derived proposition – ‘your shawl is in a French restaurant very near to your house’, and a subsequent discovery that the proposition was true *in this particular instance*. Someone who had received such a reading might say, ‘the astrological reading was true’, but a gulf remains between that statement and the generalised assertion, ‘astrology is true’. Critics of astrology do not usually deny that astrologers *sometimes* make statements which turn out to be factually correct. What is generally in question is the provenance of these ‘successes’. For instance, Geoffrey Dean presented a list entitled “Twenty-Six Ways to Convince Clients that Astrology Works”, none of which involved astrology actually working.⁶⁰ So far as the present discussion is concerned, the most relevant item in the list is number six, ‘Selective memory (Remember only the hits)’. Dean explained: ‘In astrology the number of things that can exist in both chart and person is so large that some kind of striking hit is more than likely. This will not be recognized as a statistical artifact and

⁵⁸ Patrick Curry, ‘The Historiography of Astrology: A Diagnosis and a Prescription’ in Gunther Oestmann, H. Darrel Rutkin and Kocku von Stuckrad (eds.) *Horoscopes and Public Spheres: Essays on the History of Astrology* (Berlin: Walter de Gruyter, 2005) p. 267.

⁵⁹ John Frawley quoted in: Phillipson, *Astrology Year Zero*, p. 71.

⁶⁰ Dean, ‘Astrology’ in Gordon Stein (ed.), *The Encyclopedia of the Paranormal* (Amherst: Prometheus Books, 1996), p.92.

so will be remembered as evidence for astrology.’⁶¹ The assertion here is that specific readings that *could* be taken as evidence of astrology’s truth should rather be understood as due to the operation of chance; as someone who glanced at a broken clock would get the right time twice a day, so astrology will occasionally yield a true proposition.

In terms of the philosophical principles which are the focus of this chapter, the sequence of events could then be understood as follows: In all likelihood, the client believed that astrology could be a source of true information at the outset – it is unlikely, otherwise, that she would have paid money to consult an astrologer. The proposition ‘the shawl is in a French restaurant near your house’ (or words to that effect) was derived from an analysis of an astrological horary chart, and was conveyed to her. She had enough belief in the truth of this proposition that she checked whether her shawl in fact was at the restaurant identified by the reading, and this turned out to be the case. Therefore, the client had a true belief; she believed the statement, and it proved to be true. But the crucial evaluation is then, was she *justified* in holding that belief in the first place? From the perspective of Dean et al, the belief was not justified; it presupposed that the truth of the proposition should be attributed to astrology, when in reality it should have been attributed to something else, such as the operation of chance, or ‘cold reading’ on the part of the astrologer.⁶²

Stepping away from astrology for a moment, an illustrative parallel for the problem of justification can be found in the Basenji, a species of dog that – due to the shape of its larynx – makes a sound that is often characterised as a yodel rather than a bark.⁶³ If one were to consider only the Basenji one might arrive at the proposition, ‘dogs yodel’. This would not be warranted as a statement regarding all dogs. Similarly, from the point of view of Dean et al, there is no more warrant for extrapolating from individual cases of astrology being true to the truth of astrology *sui generis*, than there is for extrapolating from the Basenji to the yodelling of dogs. In each case (the argument

⁶¹ Dean, ‘Astrology’ (1996), p.92.

⁶² Dean cited the psychologist Andrew Neher to characterise cold reading (at Dean, ‘Astrology’ [1996] p. 91]). According to Neher, astrologers were often ‘astute, sensitive individuals who pick up subtle clues “leaked” by the client. Usually neither the reader nor the client is consciously aware of this communication process, which therefore can result in a reading that seems mysteriously perceptive’ Andrew Neher, *The Psychology of Transcendence* (Englewood Cliffs, NJ: Prentice-Hall, 1980) p. 230.

⁶³ Matt Weisfeld, *The Object-Oriented Thought Process* (3rd edn.) (Upper Saddle River, NJ: Addison-Wesley, 2009) p. 133.

would go), there is not sufficient justification for moving from the individual case to the general.

3.1.5 Knowledge and its Relationship to Truth

By this point it has started to emerge that, in order to discuss the truth of astrology in general, the focus cannot be entirely on *truth* as it is discussed in epistemology, but must extend to *knowledge*. Knowledge has typically been defined as ‘justified true belief’, a formulation that is often traced back to Plato: ‘it is true judgment with an account that is knowledge; true judgment without an account falls outside of knowledge.’⁶⁴

In a footnote to the above passage, the translators Levett and Burnyeat note that ‘account’ in this sentence translates *logos*, ‘...which can also mean “statement”, “argument”, “speech”, and “discourse”.’⁶⁵ Another valid translation would be ‘reason’.⁶⁶ In order to look at the truth of astrology as a generalised subject rather than at the truth of any given astrological reading, the term that has traditionally been added to truth in order to define knowledge – ‘justification’ – is necessarily invoked. At this point the question could arise, whether the focus of this thesis should fall on ‘justification’ rather than on ‘truth’; looking, therefore, at whether astrological beliefs are justified rather than whether they are true. The approach I have taken is based on the observation that the terms are closely intertwined, so that even if the focus were nominally placed on ‘justification’, ‘truth’ would still be the dominant factor. As Kirkham observed,

It is part of the meaning of ‘justified’, ‘verified’, or ‘warranted’ that nothing is justified or verified or warranted *simpliciter*. These participles require as a complement a prepositional phrase beginning with ‘as’. If a law is justified, then it is justified as fair and useful... But what are statements or beliefs justified *as* or warranted *as*? ‘As true’ is the answer vénérable.⁶⁷

So although theories of justification are a major subject within epistemology, it is theories of truth that provide the context for justification. To quote Kirkham again:

⁶⁴ Plato, *Theaetetus*, p.223/201c. Gettier’s objection to this classic formulation of knowledge is discussed, below, in section 3.2.8 of the present chapter.

⁶⁵ Levitt and Burnyeat - *Theaetetus*, p.223 n.37.

⁶⁶ My thanks to Dorian Gieseler-Greenbaum for pointing this out (personal communication).

⁶⁷ Kirkham, *Theories of Truth*, pp.50-1.

... we cannot begin to judge the plausibility of these theories [of justification] unless we have some idea of what it is for a proposition to be true. And we cannot have such an idea unless we have an idea of what the necessary and sufficient conditions of truth are... *metaphysical* theories of truth... make it possible to evaluate the plausibility of theories of justification.⁶⁸

To focus on justification without reference to truth would have the potential to obscure rather than clarify. For instance, Dean and Kelly have argued that astrology provides the individual with ‘emotional comfort, spiritual support, and interesting ideas to stimulate self-examination.’⁶⁹ If the focus were solely upon justification, such a statement could be taken to mean that belief in astrology is justified. But this would be merely to bypass the concerns of many critics and advocates of astrology, as can be seen in Dean and Kelly’s subsequent observation: ‘note the dilemma – to get the benefits you have to believe in something that is untrue.’⁷⁰ There is a significant sense here in which belief in astrology would not, ultimately, be justified because astrology is ‘something that is untrue.’⁷¹ Justification needs – as observed by Kirkham – to be conditional upon truth. Hence the primary focus in the present work falls upon truth, and in particular the three theories of truth.

3.1.6 Substantive Theories - Three Theories of Truth

When truth is discussed in contemporary books on philosophy, the three theories of truth (*correspondence*, *coherence* and *pragmatic* theories) are typically described first and treated as a group.⁷² The three theories are often characterised as ‘substantive’ – in the sense that they treat truth as ‘a real and important property’, whereas deflationary theories (to be discussed in section 3.2.4 below) argue that the nature of truth is a

⁶⁸ Kirkham, *Theories of Truth*, p.44 (original emphasis).

⁶⁹ Geoffrey Dean and Ivan W. Kelly, ‘Is Astrology Relevant to Consciousness and Psi?’ <http://www.butterfliesandwheels.org/2003/is-astrology-relevant-to-consciousness-and-psi/> (checked 10th October 2016). The online version is expanded from: Geoffrey Dean and Ivan W. Kelly, ‘Is Astrology Relevant to Consciousness and Psi?’, *Journal of Consciousness Studies*, Vol. 10 No. 6 – 7 (2003), pp. 175 – 198. This quotation only appeared in the online version.

⁷⁰ Dean and Kelly, ‘Astrology Consciousness Psi’. This quotation only appeared in the expanded online version.

⁷¹ Dean and Kelly, ‘Astrology Consciousness Psi’. This quotation only appeared in the expanded online version.

⁷² E.g. Burgess and Burgess, *Truth*, pp. 2 – 3 (cited earlier in this chapter); Scruton, *Modern Philosophy*, pp. 97 – 111; Anthony Harrison-Barbet, *Mastering Philosophy (2nd Ed.)* (Basingstoke: Palgrave, 2001) pp.149 – 154; Manuel Velasquez, *Philosophy: a Text with Readings* (11th edn.) (Boston MA: Wadsworth, 2011) pp. 378 – 393; John P. van Gigch, *Metadecisions: Rehabilitating Epistemology* (New York: Kluwer Academic, 2003) pp.106-7. Many more texts could be cited.

pseudo-problem.⁷³ Their opposition to deflationary theories sometimes leads to them being characterised as ‘inflationary’ – as when for instance George Engelbretsen referred to ‘inflationary theories, such as correspondence, coherence, pragmatism, that take truth to be substantive – to have a content worth accounting for by defining or analyzing’.⁷⁴ As has already been seen, the three theories have been discussed as rivals since the early twentieth century. The first text I have found in which all three appear under their present names is Joachim’s *The Nature of Truth* from 1906.⁷⁵ The history of the theories and their association sometimes influences the collective term applied to them – for instance Scruton refers to them as ‘classical theories’ and Horwich, ‘traditional theories’.⁷⁶

The following three sections are summaries of the three theories of truth. In these I have attempted to focus on properties that the theories are widely agreed to possess, excluding most of the attempts made by philosophers to argue for one or another variant or permutation of a particular theory; the basic formulations will provide more than sufficient material for this initial investigation of astrology’s truth-status. Also, the following sections contain no discussion of the criticisms to which each theory has been subject; these will be dealt with in chapters 4 to 7 of this thesis, where it will be possible to look at said criticisms in light of their relevance to astrology’s truth-status.

3.1.6.1 The Correspondence Theory of Truth

The essence of the correspondence theory, as Anthony Harrison-Barbet summarised it, is that ‘if a belief is to be true it must correspond to a **fact** of some kind which “exists” in the world’.⁷⁷ Horwich illustrated the point by reference to snow and dogs:

The belief that snow is white owes its truth to a certain feature of the world: the fact that snow is white. Similarly, the belief that dogs bark is true because of the fact that dogs bark. This sort of trivial observation leads to what is perhaps the most natural and widely held account of truth, the

⁷³ Lowe, ‘Truth’, p. 882.

⁷⁴ George Engelbretsen, *Bare Facts and Naked Truths*, p.67.

⁷⁵ Harold H. Joachim, *The Nature of Truth: an Essay by Harold H. Joachim* (Oxford: Clarendon, 1906).

⁷⁶ Scruton, *Modern Philosophy*, p. 109; Horwich, ‘Theories of Truth’, p. 772.

⁷⁷ Harrison-Barbet, *Mastering Philosophy*, p.150. Bold emphasis is original.

correspondence theory, according to which a belief (statement, sentence, proposition, etc.) is true just in case there exists a fact corresponding to it...⁷⁸

In the judgement of Richard Fumerton, ‘some version of the correspondence theory of truth has been implicitly accepted by the vast majority of philosophers throughout history.’⁷⁹ In chapter 1 I cited statements from Plato and Aristotle as early attempts to characterise truth. These are sometimes taken, more specifically, as early formulations of what came to be known as the correspondence theory of truth. Thus, Plato’s ‘Visitor’ argued that a true statement ‘says *those that are*, as they are’ and a false one ‘says things different from *those that are*.’⁸⁰ In similar vein, Aristotle asserted: ‘To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, and of what is not that it is not, is true.’⁸¹ This conception of truth could subsequently be seen in St. Augustine’s statement: ‘falsehood is thinking something is what it is not... truth is that which declares what is.’⁸²

A caveat is in order at this point: the attribution of modern positions to historic philosophers inclines inevitably towards misrepresentation and anachronism, insofar as it typically proceeds by focusing on a particular quotation and taking that to be the definitive statement of that philosopher’s position, when statements at other parts of their work suggest divergent positions. This issue will be discussed in section 3.2.6 below.

A more recent formulation, and endorsement, of the correspondence theory came when, in 1918, Russell cited as a truism, ‘so obvious that it is almost laughable to mention [it]’, that ‘the world contains facts, which are what they are whatever we may choose to think about them, and... there are also beliefs, which have reference to facts, and by

⁷⁸ Horwich, ‘Theories of Truth’, p. 510.

⁷⁹ Richard A. Fumerton, *Realism and the Correspondence Theory of Truth* (Studies in Epistemology and Cognitive Theory) (London: Rowman and Littlefield, 2002) p. 37.

⁸⁰ Plato, *Sophist*, pp. 286 – 7; 263 a-b. Original emphasis. The same idea is mooted at p. 261, 240d. An example of this being taken as a precursor of the correspondence theory can be found in: Noburu Notomi, *The Unity of Plato’s Sophist: Between the Sophist and the Philosopher* (Cambridge University Press, 1999) p. 6. Kirkham characterised it as a possible precursor (Kirkham, *Theories of Truth*, p. 120).

⁸¹ Aristotle, W. D. Ross (tr.), *Metaphysics* in: Aristotle, Jonathan Barnes (ed.), *The Complete Works of Aristotle: The Revised Oxford Translation, One Volume Digital Edition* (Princeton, NJ: Princeton University Press, 1995 [1984]), pp. 3437 (IV.7, 1011b 24-8). Examples of contemporary texts citing this as the first clear formulation of correspondence theory are: Kirkham, *Theories of Truth*, pp.119 – 20; Scruton, *Modern Philosophy*, p.99.

⁸² St. Augustine, ‘Of True Religion (*De Vera Religione*)’ in: St. Augustine, John H. S. Burleigh (tr.), *Augustine: Earlier Writings* (Philadelphia, PA: Westminster Press, 1953), xxxvi, 66; p. 258.

reference to facts are either true or false.’⁸³ Despite Russell’s confidence, he was writing at a time when the correspondence theory no longer commanded unanimous support from philosophers. In the words of George Englebretsen, ‘Attacks on correspondence came, late in the nineteenth century, generally from two directions: from the British Idealists and from the American Pragmatists.’⁸⁴ I shall introduce each of the alternative theories of truth that had thus emerged – coherence and pragmatic theories – in the two following sections.

3.1.6.2 The Coherence Theory of Truth

The coherence theory of truth characterises truth in terms of the extent to which a proposition (or belief, judgement etc.) coheres with an existing body of knowledge. Joachim was the first to formulate the coherence theory under that name. He began by stating that ‘Anything is true which can be conceived. It is true because, and in so far as, it can be conceived. Conceivability is the essential nature of truth.’⁸⁵ Anticipating objections along the lines that a mythical creature such as a centaur can be conceived, he continued:

To ‘conceive’ means for us to think out clearly and logically, to hold many elements together in a connexion necessitated by their several contents. And to be ‘conceivable’ means to be a ‘significant whole’, or a whole possessed of meaning for thought. A ‘significant whole’ is such that all its constituent elements reciprocally involve one another, or reciprocally determine one another’s being as contributory features in a single concrete meaning.⁸⁶

More recently, a clear formulation was provided by Ralph Walker:

The coherence theorist holds that for a proposition to be true is for it to cohere with a certain system of beliefs. It is not just that it is true if and only if it coheres with that system; it is that the coherence, and nothing else, is what its truth consists in.⁸⁷

Elaborating on that last point, Walker concluded: ‘In particular, truth does not consist in the holding of some correspondence between the proposition and some reality which

⁸³ Bertrand Russell, ‘The Philosophy of Logical Atomism’, *The Monist* Vol. 28 No. 4 (October 1918), p. 500.

⁸⁴ George Englebretsen, *Bare Facts and Naked Truths*, p. 21

⁸⁵ Joachim, *Nature of Truth*, p. 66.

⁸⁶ Joachim, *Nature of Truth*, p. 66.

⁸⁷ Walker, *Coherence Theory*, p. 2.

obtains independent of anything that may be believed about it.’⁸⁸ Coherence theorists are united by their rejection of the realism that is assumed by the correspondence theory.

The historical roots of the coherence theory are a matter of contention amongst philosophers. Baruch Spinoza (1632 – 1677) was suggested by Walker as a precursor of coherence, and whilst this is controversial, it is relevant to consider one of the close approaches in Spinoza’s thought to the coherence theory, both as an illustration of the general orientation of coherence, and in particular for the pantheistic context Spinoza brings:⁸⁹

the human mind is part of the infinite intellect of God; thus when we say, that the human mind perceives this or that, we make the assertion, that God has this or that idea, not in so far as he is infinite, but in so far as he is displayed through the nature of the human mind...⁹⁰

For Spinoza, therefore, an idea in a human mind is ‘an adequate idea’ only to the extent that it matches an idea in God’s mind.⁹¹ While this may raise as many questions as answers, it certainly illustrates the central theme of coherence theory; that truth should be defined by referring the individual case to a larger system of some sort. For Spinoza, that ‘larger system’ was the mind of an immanent God.

An issue that arises as soon as the coherence theory has been presented is the flexibility, or vagueness, inherent in it due to differing ideas of what the supporting belief-system should be. This point was made by Walker:

what makes something a coherence theory of truth... is that it is a theory about the nature of truth, to the effect that for a proposition to be true is to fit in with some designated set of beliefs; but which set of beliefs is designated will vary from one version of the theory to another, as will the kind of fit required.⁹²

⁸⁸ Walker, *Coherence Theory*, p. 2.

⁸⁹ Walker, *Coherence Theory*, pp. 54 – 59. For an example of divergence from the view of Spinoza as an early coherence theorist: Mosteller argued that Spinoza ‘maintained a version of truth as correspondence’ – Timothy M. Mosteller, *Theories of Truth: An Introduction* (London: Bloomsbury Academic, 2014) p. 35. See also section 3.2.6 below.

⁹⁰ Benedict De Spinoza, R. H. M. Elwes (tr.), *The Ethics* in: Benedict De Spinoza, R. H. M. Elwes (tr.), *The Chief Works of Benedict De Spinoza*, Vol. II (New York: Dover, 1955 [1677]) p. 91 (Part II, Corollary to Proposition XI).; cited by Walker, *Coherence Theory*, p. 55.

⁹¹ Spinoza, *Ethics*, p. 110 (Part II, Proposition XXXIX).

⁹² Walker, *Coherence Theory*, pp. 5 – 6.

By that point in his argument he had already remarked that the ‘designated set of beliefs’ would include a subset of our beliefs ‘that is particularly fundamental or indispensable, to our thinking’, with the primary candidates being ‘the system of beliefs that human beings will hold at the ultimate stage of their historical development’ or ‘the system of beliefs held by God or the absolute’.⁹³ There is in fact, as Richard DeWitt remarked, ‘a large variety of very different coherence theories possible’, depending upon the system that is taken as providing the context for coherence; DeWitt illustrated this by reference to ‘individualistic’ and ‘group’ versions.⁹⁴ In his analysis of ‘an individualistic coherence theory’, ‘truth is relative to the individual in question. That is, what is true for Sara may not be true for Fred.’⁹⁵ For ‘group versions of coherence theories’, DeWitt gave a ‘science-based’ example, whereby ‘a belief having to do with science is true if it fits in with the collective beliefs of the group of western scientists.’⁹⁶ His conclusion was that ‘there are different versions of coherence theories possible... since there is a wide variety of different ways of specifying whose beliefs count’.⁹⁷ In terms of the categories already used in the previous chapters, therefore, a coherence theory could conform to either a nomothetic or an idiographic model of truth. The discussion of coherence theory in this thesis will be divided on these lines, with chapter 5 considering astrology’s coherence with science, and chapter 6 addressing its coherence with divination.

3.1.6.3 The Pragmatic Theory of Truth

The pragmatic theory of truth is a central part of pragmatism, a philosophical movement which began with Charles S. Peirce and William James. When this theory of truth is presented in contemporary texts, it is typically described in such terms as, ‘the view that “true” means useful’; that ‘true propositions are simply those that “work,” in the sense that they are successful in practice’; that ‘truth is what *works*, and a true proposition is

⁹³ Walker, *Coherence Theory*, p. 4.

⁹⁴ Richard DeWitt, *Worldviews: An Introduction to the History and Philosophy of Science* (2nd edn.) (Malden, MA: Wiley-Blackwell, 2010) (pp. 21 - 2).

⁹⁵ DeWitt, *Worldviews*, p. 21.

⁹⁶ DeWitt, *Worldviews*, p. 21.

⁹⁷ DeWitt, *Worldviews*, p. 21.

one that works’ and that ‘true beliefs... are those which work out well in terms of practice’.⁹⁸

The advent of pragmatism is frequently traced to Peirce’s article, ‘How to Make Our Ideas Clear’ from 1878.⁹⁹ Amongst those who make this attribution is William James, who, with Peirce, was a member of the ‘Metaphysical Club’ in which the ideas of pragmatism were first discussed, and who developed his own version of pragmatism and introduced it to a wider audience than had been reached by Peirce.¹⁰⁰ The word ‘pragmatic’ was taken by Peirce from the discussion by Immanuel Kant (1724 – 1804) of a doctor who, faced with a dangerously ill patient, needs to quickly evaluate the illness and act on that diagnosis, whilst knowing that they could be wrong; Kant dubbed this ‘pragmatic belief’ and observed that it was in effect ‘betting’.¹⁰¹ For him it was only one of several possible forms of belief; for Peirce and James however, the universe was an inherently uncertain place in which there was an element of betting behind every belief.

Another precursor of pragmatism was John Stuart Mill (1806 – 1873) with his philosophy of utilitarianism, whereby ‘actions are right in proportion as they tend to promote happiness’; William James dedicated his book *Pragmatism* (1907) to Mill, ‘from whom I first learned the pragmatic openness of mind and whom my fancy likes to picture as our leader were he alive to-day’.¹⁰² Indeed James’s pragmatism transposed utilitarianism from ethics to epistemology – as Richard Rorty (1931 – 2007) wrote,

⁹⁸ Scruton, *Modern Philosophy*, p.104; Robert Audi, *Epistemology: A Contemporary Introduction to the Theory of Knowledge* (3rd edn.) (New York: Routledge, 2011), p.249; John Hospers, *An Introduction to Philosophical Analysis* (2nd edn.), (London: Routledge and Kegan Paul, 1967 [1956]), p.117; Johnson, *Focusing on Truth*, p.64.

⁹⁹ Charles Sanders Peirce, ‘How to Make Our Ideas Clear’ – originally published in *Popular Science Monthly* 12 (January 1878), 286-302. Also in: Charles Sanders Peirce; Charles Hartshorne, Paul Weiss, Arthur W. Burks (eds.), *The Collected Papers of Charles Sanders Peirce (Electronic Edition)* (Charlottesville, VA: InteLex Corporation, 1994) CP 5.388 – 5.410. (See note on Peirce’s collected works, and referencing system, in this thesis’s bibliography.) Examples of texts which cite the paper as the starting point of pragmatism include: H. S. Thayer, *Meaning and Action: A Critical History of Pragmatism* (Indianapolis, IN: Hackett, 1981) p.125; Michael Bacon, *Pragmatism: An Introduction* (Cambridge: Polity, 2012), pp. 23 – 24.

¹⁰⁰ The history of the club is the subject of: Louis Menand, *The Metaphysical Club* (London: HarperCollins, 2001).

¹⁰¹ Immanuel Kant, Norman Kemp Smith (tr.), *Immanuel Kant’s Critique of Pure Reason* (London: Macmillan, 1973 [1929/1787] A 824, B852, p. 648. Peirce’s use of Kant is discussed in Menand, *Metaphysical Club*, p. 227.

¹⁰² John Stuart Mill, *Utilitarianism* in Mary Warnock (ed.), *John Stuart Mill: Utilitarianism; On Liberty; Essay on Bentham, together with selected writings of Jeremy Bentham and John Austin* (London: Collins/Fontana, 1962 [1861]), p. 257 (ch. 2); William James, *Pragmatism*, p. 480 (dedication).

‘James and Nietzsche did for the word “true” what John Stuart Mill had done for the word “right”’.¹⁰³

Peirce characterised the fundamental nature of pragmatism in what has become known as the ‘pragmatic maxim’: ‘Consider what effects, which might conceivably have practical bearings, we conceive the object of our concept to have. Then, our conception of these effects is the whole of our conception of the object.’¹⁰⁴ His understanding of how truth should then be defined under pragmatism is: ‘The opinion which is fated to be ultimately agreed on by all who investigate is what we mean by truth, and the object represented by this opinion is real.’¹⁰⁵

Peirce and James had different ideas about pragmatic truth. The essential difference is that Peirce saw science as the ultimate arbiter of truth-claims, whereas James gave more importance to personal experience. Thus Peirce made it clear that he saw the investigation, and ultimate agreement, of which he spoke as being the domain, not of philosophers – ‘These minds do not seem to believe that disputation is ever to cease’ – but of scientific research, wherein ‘Different minds may set out with the most antagonistic views, but the progress of investigation carries them by a force outside of themselves to one and the same conclusion.’¹⁰⁶ Indeed he argued that ‘Science and philosophy seem to have been changed in their cradles. For it is not knowing, but the love of learning, that characterizes the scientific man; while the “philosopher” is a man with a system which he thinks embodies all that is best worth knowing.’¹⁰⁷

In the talk ‘Philosophical Conceptions and Practical Results’ from 1898, James acknowledged Peirce as the originator of pragmatism but added, ‘I think myself that [the principle of pragmatism] should be expressed more broadly than Mr. Peirce

¹⁰³ Richard Rorty, ‘Pragmatism as Romantic Polytheism’ in Morris Dickstein (ed.), *The Revival of Pragmatism: New Essays on Social Thought, Law and Culture* (Durham, NC: Duke University Press, 1998) p. 21. The degree of epistemological confluence between James and Nietzsche is presented as controversial in: Harvey Cormier, *The Truth is What Works: William James, Pragmatism, and the Seed of Death* (Lanham, MD: Rowman & Littlefield, 2001) pp. 31 – 47.

¹⁰⁴ Peirce, ‘How to Make Our Ideas Clear’, p. 293, also in: Peirce, *Collected Papers*, CP 5.402.

¹⁰⁵ Peirce, ‘How to Make Our Ideas Clear’, p. 300, also in: Peirce, *Collected Papers*, CP. 5.407.

¹⁰⁶ Peirce, ‘How to Make Our Ideas Clear’, p. 300, also in: Peirce, *Collected Papers*, CP. 5.407.

¹⁰⁷ Peirce, ‘Lessons from the History of Science’, in: Peirce, *Collected Papers*, CP I.44. This is a fragment from a planned treatise on this history of science which was not completed by Peirce.

expresses it.’¹⁰⁸ An idea of the extra breadth of definition that James desired can be glimpsed in the fact that, almost immediately, he was deep in a discussion of God’s existence.¹⁰⁹ James was willing to allow much greater significance to subjective experience, including the religious and mystical – as might be expected from the author of *The Varieties of Religious Experience*.¹¹⁰ Slater formulated the difference precisely:

James seems to have understood the [pragmatic] method’s key notion of practical effects in somewhat broader and looser terms than Peirce, who strictly identified the “practical bearings” of an idea with its sensible effects... [and yet] In order for there to be a meaningful difference between two ideas or theories, as James astutely observes, there need not be an empirically sensible or perceivable difference.’¹¹¹

There is precedent in the current literature on pragmatism for taking this division between Peirce and James as fundamental. For example the philosopher Nicholas Rescher has argued that there are effectively two pragmatisms – a “pragmatism of the left” and a “pragmatism of the right”, representing the legacies of James and Peirce respectively.¹¹² This is close to Susan Haack’s remark that ‘Peirce and James are very different kinds of thinker, and their conceptions of pragmatism are significantly different: Peirce’s logical and realist, James’s psychological and nominalist.’¹¹³ As the title of his book, *The Two Pragmatisms – from Peirce to Rorty* suggests, Howard Mounce also divides pragmatism into two forms, arguing that James’s pragmatism is ‘in conflict with the first Pragmatism [i.e. that of Peirce], not at incidental points, but in its essentials.’¹¹⁴ The explication of this fundamental difference between Peirce’s and James’s versions of pragmatism is directly relevant to the consideration of astrology’s truth-status and is therefore deferred until pragmatism is considered in chapter 7, below.

¹⁰⁸ William James, ‘Philosophical Conceptions and Practical Results’ in: William James, Gerald E. Myers (ed.), *William James: Writings 1878 – 1899* (New York, NY: The Library of America, 1992 [1898]) pp. 1080.

¹⁰⁹ William James, ‘Philosophical Conceptions’, pp. 1082 – 1085.

¹¹⁰ William James, *The Varieties of Religious Experience: A Study in Human Nature* (New York, NY: Penguin, 1982 [1902]).

¹¹¹ Michael R. Slater, *William James on Ethics and Faith* (Cambridge University Press, 2009) p.137

¹¹² Nicholas Rescher, *Realistic Pragmatism: An Introduction to Pragmatic Philosophy* (State University of New York Press, 1979), pp.64-5; Nicholas Rescher, *Pragmatism: the Restoration of Its Scientific Roots* (New Brunswick, New Jersey: Transaction, 2012) - particularly the table listing properties of the two pragmatisms at p.177.

¹¹³ Susan Haack, *Manifesto of a Passionate Moderate: Unfashionable Essays* (University of Chicago Press, 1998) p.25.

¹¹⁴ Howard Mounce, *The Two Pragmatisms: From Peirce to Rorty* (London: Routledge, 1997) p.231.

3.2 Precedents for Using the Three Theories of Truth

The relevance of the three theories of truth to the evaluation of astrology's truth-status can be illustrated in two ways, presented in the following two sub-sections. In sub-section 3.2.1 I will consider instances from discussions of astrology in which the author invokes the underlying principle behind one of the truth theories, often, it seems, without being aware that this is the case. In sub-section 3.2.2 I will then survey some cases where the three theories (or a closely related set) have been used to evaluate truth in various other fields.

3.2.1 Precedents from Discussions of Astrology

An example of two of the three theories appearing in a discussion of astrology can be found in Dawkins's statement, already cited in the previous chapter:

For us to take a hypothesis seriously, it should ideally be supported by at least a little bit of evidence. If this is too much to ask, there should be some suggestion of a reason why it might be worth bothering to *look* for evidence... But astrology has nothing going for it at all, neither evidence nor any inkling of a rationale which might prompt us to look for evidence.¹¹⁵

Dawkins's 'evidence' can be understood as the 'facts' that define truth under the correspondence theory. His 'reason why it might be worth bothering to *look*' would take the form of astrology's coherence with some explanatory system, and would therefore belong to the coherence theory. A little later in the article he suggests: 'A pharmaceuticals manufacturer who marketed a birth-control pill that had not the slightest demonstrable effect upon fertility would be prosecuted under the Trade Descriptions Act...'.¹¹⁶ Here the emphasis falls on what he sees as astrology's failure to work or be useful; this can therefore be understood as a criticism in terms of the pragmatic theory of truth.

Similarly, the principles of the three theories of truth can be seen in the critiques of astrology by Dean et al. Thus the correspondence theory is the underlying model when they discuss the testing of specific astrological claims – as when, for instance, they suggested that the reputed generosity of people born with the Sun in Leo could be tested

¹¹⁵ Dawkins, 'Real Romance', pp. 17 – 18.

¹¹⁶ Dawkins, 'Real Romance', p. 18.

by looking at the size of the tips left by this group of people in restaurants.¹¹⁷ The coherence theory was evoked when they suggested that anyone who was undecided about the truth of astrology should:

ask yourself which alternative is the more likely: (1) That pervasive astrological influences exist which contradict known science (yet on whose nature astrologers spectacularly disagree), or (2) that the many known errors in human reasoning (of which most astrologers are spectacularly unaware) explain astrological beliefs.¹¹⁸

A choice is proposed between two explanatory systems – one in which astrology would be true, and one in which astrology is not true, but – due to a combination of chance and human reasoning errors – sometimes appears true. An appeal is made to the coherence of the latter position with the explanatory system of material science, and the argument can thus be seen as an example of the coherence theory of truth.

When Dean et al looked at astrology from the perspective of pragmatic truth, their verdict was less damning than that of Dawkins:

A warm and sympathetic astrologer provides non-threatening therapy that is sometimes hard to come by, especially as no admission of some physical, mental, or moral weakness is required, as with a doctor or psychiatrist or priest.¹¹⁹

They also raised the possibility that various character flaws might cause astrologers to be unhelpful, and this is to the point insofar as what they characterise as useful (and therefore, potentially, true in terms of the pragmatic theory) is not astrology per se, but the astrologer and the human interaction they provide.

3.2.2 Precedents from Other Fields

In addition to the unacknowledged presence, in existing discussion about astrology's truth-status, of the three theories of truth, there is another type of precedent and justification for the approach taken in this thesis. This is the deployment of the three theories of truth (or sometimes, two of them) in discussion of truth-related issues in fields that range from religion to legal practice. In the following survey, where a text

¹¹⁷ In Phillipson, *Astrology Year Zero*, p. 128

¹¹⁸ Dean et al quoted in: Phillipson, *Astrology Year Zero*, p. 166.

¹¹⁹ Dean et al quoted in: Phillipson, *Astrology Year Zero*, p. 158.

proposes a theory other than the three main theories, the additional theory will be discussed in sections 3.2.2 – 3.2.4.

In *Religions and the Truth*, Hendrik M. Vroom (1945 – 2014) discussed the three theories of truth as a means to the end of fostering inter-religious understanding: ‘In order to arrive at a responsible theological appreciation... of other religious traditions, it is necessary to be aware of what other religious traditions think about truth.’¹²⁰

Louis Dupré took an approach aimed at characterising the truth-status of mystical experience within religion. This saw him broach the possibility that, here, ‘Truth refers to being, rather than to knowledge’.¹²¹ He discussed the correspondence and coherence theories, finding them to be relevant to, but not sufficient for, an adequate characterisation of religious truth.¹²²

The three theories, characterised as ‘major theories of truth’, were discussed by Walter Kaufmann (1921 – 1980) in his *Critique of Religion and Philosophy*.¹²³ Kaufmann’s investigation was primarily of the relationship between different religious traditions and philosophy. Given his iconoclastic aspiration – ‘to show the utter inadequacy of the popular pictures, to see the familiar in new perspectives, to make suggestions for a new map – and to stimulate thought’, his focus was on the shortcomings of existing theories of truth.¹²⁴

The three theories were treated more sympathetically, and systematically, by K. N. Jayatilleke (1920 – 1970) in his *Early Buddhist Theory of Knowledge*.¹²⁵ Jayatilleke evaluated the three theories of truth primarily from an historical and scriptural

¹²⁰ Hendrik M. Vroom, J.W. Rebel (tr.), *Religions and the Truth – Philosophical Reflections and Perspectives* (Grand Rapids: William B. Eerdmans Publishing, 1989) p. 388. The theories of truth are introduced at pp. pp.38-42.

¹²¹ Louis Dupré *Religious Mystery and Rational Reflection* (Grand Rapids: William B. Eerdmans Publishing, 1998), p. 19. Correspondence and coherence theories are introduced at pp.29-33.

¹²² Dupré, *Religious Mystery*, p. 33.

¹²³ Walter Kaufmann, *Critique of Religion and Philosophy* (Princeton University Press, 1958), pp. 74 – 6 for the three theories.

¹²⁴ Kaufmann, *Critique of Religion and Philosophy*, p. 220.

¹²⁵ K.N. Jayatilleke, *Early Buddhist Theory of Knowledge* (Delhi: Motilal Banarsidass, 1963).

perspective, using them to characterise the senses that the word ‘truth’ might hold in the Theravada tradition’s Pāli Canon without finally deciding for one or another.¹²⁶

The work of both Kaufmann and Jayatilleke were taken as precedents by Roger R. Jackson who – in a substantial introduction to his translation of rGyal tshab rje’s commentary on the *Pramāṇasiddhi* chapter of Dharmakīrti’s *Pramāṇavārttika* - applied the three theories to Buddhist thought in general and concluded in favour of the correspondence theory: ‘for all practical purposes saṃsāra and nirvāṇa must be assumed to be “the way things really are,” and thus in some meaningful way to “correspond” to actual states-of-affairs.’¹²⁷ Jackson’s argument was subsequently criticised by José Ignacio Cabezón.¹²⁸ Cabezón began by remarking that amongst all the theories of truth to be found in western philosophy, ‘Three such theories – the correspondence, coherence and pragmatic theories – stand out prominently... as being the most important’.¹²⁹ He argued, against Jackson, that ‘the pragmatic theory... represents the most promising option for the Buddhist theologian.’¹³⁰

In a different field, the philosopher David A. Jopling lamented the lack of a rigorous definition of truth in psychodynamic psychotherapy. After reproducing numerous descriptions of insight from psychodynamic psychotherapy literature he remarked upon

the absence of any discussion of the question of the *truth criteria* that are called upon when insights are evaluated as true or false. None of these passages addresses the epistemic question of *what it is* that makes one insight true and another false, or the question of what it means to say that an insight is true or false. Each [author] is silent on the question of whether the truth of insights consists (for example) in their correspondence with psychological facts (the correspondence theory of truth), or their internal coherence and consistency (the

¹²⁶ Jayatilleke, *Early Buddhist Theory*, in particular pp. 352 – 368 for the three theories.

¹²⁷ Roger R. Jackson, *Is Enlightenment Possible? Dharmakīrti and rGyal tshab rje on Knowledge, Rebirth, No-Self and Liberation* (New York: Snow Lion Publications, 1993) pp. 61 – 2. pp.1-107

¹²⁸ José Ignacio Cabezón, ‘Truth in Buddhist Theology’ in Roger Jackson & John Makransky (eds), *Buddhist Theology – Critical Reflections by Contemporary Buddhist Scholars* (London: RoutledgeCurzon, 2000), pp.136-154.

¹²⁹ Cabezón, ‘Truth in Buddhist Theology’, p. 137.

¹³⁰ Cabezón, ‘Truth in Buddhist Theology’, p. 148.

coherence theory of truth), or their pragmatic value (the pragmatic theory of truth) – three of the more well-known theories of truth.¹³¹

From an historiographical perspective, Megan Bishop Moore set out to investigate ‘how correspondence, coherence, and pragmatic theories of truth appear in histories of ancient Israel in order to help clarify the nature of the truth claims historians of ancient Israel are making.’¹³² She concluded that historians of ancient Israel tended primarily to presuppose the correspondence theory in their work, so that ‘history’s truth lies in its correspondence to reality’ – albeit, there is an increasing recognition amongst contemporary scholars that ‘historical representation is an imperfect and complicated task.’¹³³

In his recent book *Truth in Marketing*, Thomas Boysen Anker applied the three theories of truth to ‘marketing expressions and entities’, setting out to demonstrate ‘how three different theories of truth explain the truth properties of three overarching categories of marketing claims.’¹³⁴ In common with each of the entries in this section, Anker’s text uses the theories of truth as a tool with which to analyse, characterise and understand the issues raised when the question ‘what is true?’ is raised in a particular area of enquiry; this is also what I aspire to do in this thesis.

In addition to these texts, it is also relevant to remark the recent emergence of an academic field, ‘Judgment and Decision Making’, which studies the basis of judgments in different disciplines such as public policy, economics, legal applications and medical applications.¹³⁵ Publications in the field often draw on the three theories of truth in similar ways to the texts discussed above, usually with an emphasis on the correspondence and coherence theories, with the pragmatic theory in the background.¹³⁶

¹³¹ David A. Jopling, *Talking Cures and Placebo Effects* (Oxford University Press, 2008) p.55.

¹³² Megan Bishop Moore, *Philosophy and Practice in Writing a History of Ancient Israel* (New York: T & T Clark, 2006) p. 29.

¹³³ Moore, *Philosophy and Practice*, p. 31; p. 130.

¹³⁴ Thomas Boysen Anker, *Truth in Marketing: A theory of claim-evidence relations* (London: Routledge, 2016), p. 4; p. 20.

¹³⁵ These four fields each have a section, containing multiple papers, in: Terry Connolly, Hal R. Arkes & Kenneth R. Hammond (eds.) *Judgment and Decision Making: An Interdisciplinary Reader* (2nd edn.) (Cambridge University Press, 2000).

¹³⁶ As e.g. in Neal V. Dawson, ‘Correspondence and coherence in science: a brief historical perspective’, *Judgment and Decision Making* Vol. 4 no. 2, March 2009, pp. 126 – 133.

These studies are supported by the *Society for Judgment and Decision Making*, which was formed in 1980.¹³⁷

3.3 Additional Theories and Issues

In order to give as straightforward a picture as possible of the basic epistemological approach I will use in this thesis, a number of theories and issues were temporarily set to one side in the first half of this chapter. The most significant of these will now be considered.

3.3.1 The Gettier Problem for the Definition of Knowledge

The definition of knowledge as ‘justified true belief’, cited in section 3.1.4 above, has not been considered entirely adequate since an article by Gettier in 1963.¹³⁸ Gettier’s fundamental point was that it was possible, albeit unlikely, that one could hold a belief, be justified in doing so, and the belief should prove true, yet that it was an unlikely series of coincidences which eventuated in the belief proving true, rather than the more plausible justification one held. There can therefore be – as O’Brien puts it – instances wherein the truth of a justified true belief should be attributed to luck, rather than knowledge.¹³⁹ Gettier’s contention was that, this being the case, the formulation ‘justified true belief’ would not suffice as a definition of knowledge.

The example Gettier gave to illustrate his point is complicated.¹⁴⁰ A more straightforward example was coined by O’Brien. He imagined that, knowing that England had just started a football match against Germany, he then heard cheers from a nearby pub, and on this basis believed that England had scored. It was true that England had scored at that moment, and his rationale for believing this to be the case – the assumption of a crowd in the pub watching the game on television and celebrating the goal – was strong, so that the belief was justified as well as true. However, he then proposed that the crowd in the pub had been watching a karaoke competition rather than

¹³⁷ History of the society on their website at: www.sjdm.org/history.html (accessed 21st August 2019).

¹³⁸ Edmund L Gettier, ‘Is Justified True Belief Knowledge?’ in *Analysis*, Vol. 23, No. 6 (Jun., 1963), pp. 121-123.

¹³⁹ Dan O’Brien, *An Introduction to the Theory of Knowledge* (Cambridge: Polity, 2006), p. 13.

¹⁴⁰ Gettier’s example uses a belief which seems to lack justification, as discussed by: Alan Millar, ‘How Reasons for Action Differ from Reasons for Belief’ in Simon Robertson (ed.), *Spheres of Reason: New Essays in the Philosophy of Normativity* (Oxford University Press 2009) p. 152.

football. By coincidence, they applauded a performer at the moment England scored their goal. In such a case – Gettier’s argument would contend – there is justified true belief but not knowledge, and this discrepancy invalidates the former as a complete definition of the latter.

I believe this to be a case wherein the continuing quest for a formally impeccable philosophical structure diverges from the issues which have significant consequences for a study such as this one. If the aim is to find philosophical terms which define concepts such as ‘knowledge’ with infallible logic and reliability, then the issue Gettier raises is a problem. In its application to the problem of truth-issues in astrology, however, the theoretical possibility of a misapprehension similar to that of Gettier intruding is not problematic. Gettier’s problem arises only in cases where a belief is true and justified, and refers by definition to an anomalous situation. Since the primary focus of this thesis is on the truth-status of astrology on the whole, rather than on any specific instance of astrology, it can be said that the Gettier problem only begins at a point where the present enquiry would already have finished.

3.3.2 Propositional and Non-propositional Knowledge

So far in this chapter, ‘knowledge’ has meant ‘propositional knowledge’ – also known as ‘factual knowledge’ and ‘knowing that’. As the name suggests, this is concerned with knowledge that can be expressed through propositions. Propositions hold the promise of being either true or false, and hence propositional knowledge holds out the prospect of getting to the truth of things, making it the kind of knowledge that philosophers have generally been most concerned with.¹⁴¹ There are however other forms of knowledge.

The works of Plato and Aristotle contain an array of terms for different forms of knowledge – for instance in the *Nicomachean Ethics* Aristotle lists five: art (*technē*), knowledge (*epistēmē*), practical wisdom (*phronēsis*), philosophic wisdom (*sophia*), and comprehension (*nous*).¹⁴² The terms carry different connotations in different texts and

¹⁴¹ This position is asserted by Fumerton in his *Epistemology*, p. 2.

¹⁴² Aristotle, W. D. Ross (tr.), J. O. Urmson (revisions to tr.) *Nicomachean Ethics* in: Aristotle, Jonathan Barnes (ed.), *The Complete Works of Aristotle: The Revised Oxford Translation, One Volume Digital*

it is difficult, perhaps impossible, to be certain of the intended nuances. An example of this is to be found in Cristina Ionescu's discussion of the terms *sophia* and *phronēsis*, which are generally both synonymous with 'wisdom'; in the *Meno*, however, Socrates uses *phronēsis* for wisdom properly understood, and *sophia* for popular misconceptions of wisdom.¹⁴³ When J. C. Spender – aiming to apply the concept of knowledge to the understanding of contemporary business firms – surveyed the array of relevant terms to be found in ancient Greek philosophy he concluded that, for a real-world investigation: 'The problem here is that we have too many alternatives and the relations between the types of knowledge are unclear.'¹⁴⁴

A simpler distinction between two forms of knowledge was mooted in 1865 by John Grote (1813 – 66), and was subsequently used and developed by William James.¹⁴⁵ This is the distinction between 'knowledge-of-acquaintance' and 'knowledge-about' as James called them.¹⁴⁶ The former is direct and experiential, whereas the latter is conceptual. James characterised the difference between the two forms of knowledge with a vivid illustration:

In training-institutions for the blind they teach the pupils as much about light as in ordinary schools... But the best taught born-blind pupil of such an establishment yet lacks a knowledge which the least instructed baby has. They can never show him what light is in its 'first intention'; and the loss of that sensible knowledge no book-learning can replace.¹⁴⁷

A similar distinction was subsequently made by Russell, though without reference to James or Grote.¹⁴⁸ A variation on the theme, which gave a more dynamic orientation to

Edition (Princeton, NJ: Princeton University Press, 1995 [1984]), p. 3862 (Book VI, 1139b15 – 1139b17).

¹⁴³ Cristina Ionescu, *Plato's Meno: An Interpretation* (Lanham, MD: Lexington Books, 2007) p. 33 n.6.

¹⁴⁴ J. C. Spender, 'Making Knowledge the Basis of a Dynamic Theory of the Firm', *Strategic Management Journal*, Vol. 17 (Winter Special Issue) 1996 p. 49.

¹⁴⁵ John Grote, *Exploratio Philosophica: Rough Notes on Modern Intellectual Science, Part I* (Cambridge: Deighton, Bell & Co, 1865) pp. 60 – 1. First discussed by James in: William James, 'On the Function of Cognition', *Mind* Vol. 10, No. 37 (Jan. 1885) pp. 27 – 44, Grote cited at p. 31; subsequently in: William James, *The Principles of Psychology* Vol. I (New York: Henry Holt and Company, 1890) pp. 221 – 2 and recurring in his works thereafter.

¹⁴⁶ James, 'Function of Cognition', p. 43 (and *passim*).

¹⁴⁷ William James, *The Principles of Psychology* Vol. II (New York: Henry Holt and Company, 1890) p. 4.

¹⁴⁸ Bertrand Russell, 'On Denoting', *Mind* Vol. 114, No. 456 (Oct 1905) pp. 873 – 887; Bertrand Russell, 'Knowledge by Acquaintance and Knowledge by Description', *Proceedings of the Aristotelian Society*, Vol. 11 (1910 – 11) pp. 108 – 128. Discussion of the parallels and differences between James's and Russell's conceptions is discussed in: Ian Proops, 'Russellian Acquaintance Revisited', *Journal of the History of Philosophy* Vol. 52 No. 4 (2014), pp. 779 – 811.

knowledge-of-acquaintance, was introduced by Gilbert Ryle in 1946, without reference to Grote, James or Russell.¹⁴⁹ Ryle distinguished between ‘knowledge how’, defined as ‘the discovery of ways and methods of doing things’; and ‘knowledge that’, defined as ‘the discovery of truths or facts’¹⁵⁰ The essential point is that knowledge of propositions (‘knowing that’) is somewhat distinct from knowledge of how to do things (‘knowing how’): ‘a man might accept any set of hypothetical propositions and still not know how to cook or drive a car.’¹⁵¹ This distinction was subsequently developed and promulgated by Michael Polanyi (1891 – 1976), using the terms ‘explicit knowledge’ and ‘tacit knowledge’.¹⁵²

The relevant point for this discussion is that there is substantial precedent for distinguishing between propositional knowledge and knowledge that is direct and experiential rather than propositional. The former possibility informs a theory of truth that has not so far been considered, and to which I now turn.

3.3.3 Theories of Truth as Revelation/Disclosure

Martin Holbraad has argued for a revelatory model as the most appropriate way to consider the nature of truth in divination, and James Brockbank – following Holbraad – has applied this to astrology as divination.¹⁵³ Louis Dupré argued that it was necessary to consider truth as disclosure in order properly to characterise truth in religion, and in doing so he drew particularly on the thought of Martin Heidegger (1889 – 1976).¹⁵⁴ Although Holbraad does not discuss Heidegger in this context, their views show significant parallels.

¹⁴⁹ In: Gilbert Ryle, ‘Knowing How and Knowing That’, *Proceedings of the Aristotelian Society* Vol. 46 (1945 – 6), pp. 1 – 16.

¹⁵⁰ Ryle, ‘Knowing How and Knowing That’, p. 4; subsequently developed in: Gilbert Ryle, *The Concept of Mind* (London: Hutchinson, 1949), pp. 25 – 61.

¹⁵¹ Ryle, ‘Knowing How and Knowing That’, p. 10.

¹⁵² Michael Polanyi, *The Tacit Dimension* (New York: Doubleday, 1966). Polanyi acknowledged Ryle’s precedent (*Tacit Dimension*, p. 7) and also the parallel with different words for ‘knowing’ in different languages – he gave the examples of ‘wissen’ and ‘können’ in German, which had also been remarked by Grote (1865) Vol. 1 p. 60 and James (1885), p. 31. For the connection between James and Polanyi: G. William Barnard, ‘*The Varieties of Religious Experience: Reflections On Its Enduring Value*’ in Michel Ferrari (ed.), *The Varieties of Religious Experience: Centenary Essays* (Exeter: Imprint Academic, 2002) p. 60 n. 7.

¹⁵³ Martin Holbraad, *Truth in Motion: The Recursive Anthropology of Cuban Divination* (Chicago, IL: University of Chicago Press, 2012), pp. 207 – 10; Brockbank, *Responsive Cosmos*, pp. 203 – 209, p. 222.

¹⁵⁴ Dupré, *Religious Mystery*, pp. 33-4.

Holbraad characterised what he termed ‘the representationist account of truth’ – of which he cited the correspondence and coherence theories as examples – as involving ‘a comparison between representations and facts in order to ascertain a match of some sort.’¹⁵⁵ This is not entirely correct – it would be more accurate to say that the coherence theory involves a comparison between specific representations and systematised representations – but that does not affect his basic argument, which is that there is a fundamental problem: ‘how can tokens of distinct ontological types be brought into relation with one another, as, for example, truth-matches would require?’¹⁵⁶ This critique of conventional truth theories is substantially the same as is found in Heidegger. Thus for instance Heidegger, speaking of a proposition about a coin, asked: ‘How can what is completely dissimilar, the statement, correspond to the coin? It would have to become the coin and in this way relinquish itself entirely.’¹⁵⁷ For him, “‘Truth” is not a feature of correct propositions that are asserted of an “object” by a human “subject” and then “are valid” somewhere, in what sphere we know not’.¹⁵⁸

The critique offered by Heidegger, and subsequently Holbraad, of conventional truth theories is thus essentially the same, with the caveat that Heidegger was concerned with truth in general, whilst Holbraad made it clear that divinatory truth was his focus and that he did not wish to take a position regarding the viability of ‘representationist’ accounts of truth in other contexts.¹⁵⁹ That point aside, the positive theses that Holbraad and Heidegger advanced are also at the least close to one another, being characterised by ‘revelation’ or ‘disclosure’ respectively. Thus Holbraad stated, regarding the model of truth he saw as appropriate for the understanding of divination, ‘I venture to call the truth in question “revelatory”... for at issue here is not the veracity of the way things are thought about or represented, but rather the capability that things... have to reveal themselves in particular ways...’¹⁶⁰

¹⁵⁵ Holbraad, *Truth in Motion*, p. 205; p. 206; p. 205.

¹⁵⁶ Holbraad, *Truth in Motion*, p. 206.

¹⁵⁷ Martin Heidegger, John Sallis (tr.), ‘On the Essence of Truth’ in: Martin Heidegger, William McNeill (ed.), *Pathmarks* (Cambridge: Cambridge University Press, 1998 [1967 as *Wegmarken*]) p. 140.

¹⁵⁸ Heidegger, ‘Essence of Truth’, p. 146.

¹⁵⁹ Holbraad, *Truth in Motion*, pp. 206 – 7.

¹⁶⁰ Holbraad, *Truth in Motion*, p. 207.

Heidegger asserted that ‘truth is disclosure of beings through which an openness essentially unfolds’.¹⁶¹ He argued that the Greek word *alētheia* – usually translated as ‘truth’ – should rather be translated as ‘unconcealment’; in his view this translation was not only more literal, but also had the benefit of implying ‘the directive to rethink the ordinary concept of truth in the sense of the correctness of statements and to think it back to that still uncomprehended disclosedness and disclosure of beings.’¹⁶² For both Heidegger and Holbraad, then, there is a truth that can only be experienced, that cannot be understood through propositions. In the terms already discussed, this would be idiographic truth. In Heidegger’s view, this was the fundamental nature of truth for ancient Greek philosophers including Plato and Aristotle. He argued this thesis at length with regard to Plato’s parable of the cave: ‘there is nothing here about resemblance, correctness or correspondence.’¹⁶³ It may be remarked in passing that the idea of ‘knowledge by presence’ is also a significant theme in the writings of Plotinus (204 – 270) and al-Suhrawardi (1153 – 1191).¹⁶⁴ The relevance of Heidegger’s perspective on truth to astrology has been touched on – and endorsed – by Mike Harding and Geoffrey Cornelius, though neither developed a full treatment of it.¹⁶⁵

Brockbank’s discussion and application of Holbraad, is the fullest account of a revelatory model of truth in relation to astrology, and I will therefore focus on that. Brockbank characterised his view of astrology as a divinatory one, and acknowledged the influence of Cornelius.¹⁶⁶ Given that in speaking of astrology one is speaking of divination, he stated that ‘Holbraad considers divinatory truth revelatory and we accept his understanding.’¹⁶⁷ A consequence of that is that conventional theories of truth are not applicable to astrology: ‘The answer to the statement [sic] ‘is astrology true’ is neither ‘yes’ nor ‘no’ but that “astrology aims at astrological truth”’.¹⁶⁸

¹⁶¹ Heidegger, ‘On the Essence of Truth’, p. 146.

¹⁶² Heidegger, ‘On the Essence of Truth’, p. 144.

¹⁶³ Martin Heidegger, Ted Sadler (tr.), *The Essence of Truth: On Plato’s Cave Allegory and Theaetetus* (London: Continuum, 2002 [1988 as *Vom Wesen der Wahrheit*]), p. 23

¹⁶⁴ E.g. Plotinus, *Enneads*, p. 701 (VI. 9.4.1-2); Mehdi Ha’iri Yazdi, *The Principles of Epistemology in Islamic Philosophy: Knowledge by Presence* (New York: SUNY, 1992) p. 24.

¹⁶⁵ E.g. Michael Harding, *Hymns to the Ancient Gods* (London: Arkana, 1992) pp. 81 – 2, Harding, ‘Truth of Astrology’, pp. 14 – 15; Cornelius, *Field of Omens*, p. 280.

¹⁶⁶ Brockbank, *Responsive Cosmos*, p. 76.

¹⁶⁷ Brockbank, *Responsive Cosmos*, p. 222.

¹⁶⁸ Brockbank, *Responsive Cosmos*, pp. 201 – 2.

‘Astrological truth’ is characterised by being direct, which is to say non-propositional; but there is more to it than this, for according to Brockbank it also necessarily involves a ‘responsive cosmos’.¹⁶⁹ This is a key concept for astrology-as-divination, and I will refer to it throughout the remainder of this thesis. In every case when I use the term it carries the meaning given to it by Brockbank: ‘A non-human agency is involved in the coming together of astrologer, astrological chart, client and context in a way that will enable the astrologer to provide relevant guidance on the matter being considered.’¹⁷⁰ Brockbank argued that under the theory of astrological truth, predicated upon a responsive cosmos, ‘astrologers when they practice assume the truth of astrology before they start’, and are right to do so for ‘there is no essential difference between the assumption of the Responsive Cosmos and the assumption that truth is ascribed through the interpretive process.’¹⁷¹ In other words, given the premise that we live in a responsive cosmos, and given that astrology is defined as a medium through which the responsive cosmos responds, then if and when astrology occurs, that is by definition a response from the cosmos. For this reason, Brockbank’s model of astrological truth precludes negative evaluation: ‘astrology is not subject to empirical verification, is non-falsifiable and is not directly concerned with accuracy.’¹⁷² A similar position was espoused by the astrologer John Frawley: ‘it is an inescapable consequence of the very premises of horary [astrology] that the judgment given will be the right one, whether it be ‘correct’ or not.’¹⁷³

This is a challenging position. The extent of the challenge was illustrated by Brockbank with reference to a case reported by Holbraad, as follows. A follower of Santería in Cuba told Holbraad that in a divinatory *séance* (*itá*) she had been told her that she needed to beg forgiveness from her mother for terrible misdeeds, when neither she nor her mother were aware of any problem.¹⁷⁴ Holbraad argued that the right way to take this was one wherein ‘the woman’s divinatory fiasco is articulated not as a matter of the

¹⁶⁹ Brockbank, *Responsive Cosmos*, p. 7. As evidenced on that page, Brockbank capitalised the term when preceded by the definite article (‘the Responsive Cosmos’), and used lower case for the indefinite article (‘a responsive cosmos’). When not quoting Brockbank directly I will use lower case for the term.

¹⁷⁰ Brockbank, *Responsive Cosmos*, p. 76; also similar statement at p. 7.

¹⁷¹ Brockbank, *Responsive Cosmos*, p. 212-3; p. 212.

¹⁷² Brockbank, *Responsive Cosmos*, p. 212.

¹⁷³ John Frawley, ‘Neptunia Replies’, *The Astrologer’s Apprentice* No.17 (2000), p.45. Discussed at: Bird, *Astrology in Education*, p. 154 n. 124; Garry Phillipson, ‘Modern Science, Epistemology and Astrology’, *Correlation* Vol. 23 No. 2 (2006), p. 17.

¹⁷⁴ Brockbank, *Responsive Cosmos*, p. 214, citing: Martin Holbraad, ‘Definitive Evidence, from Cuban Gods’, *The Journal of the Royal Anthropological Institute* Vol. 14 (2008) p. 105.

world giving the lie to the divination, but rather as a refusal on the woman's part to accept the oracle's reinvention of her.'¹⁷⁵ Brockbank applied this to astrology and concluded, 'There is no contradiction in saying that an interpretation is astrologically true but representatively false because we are using different criteria.'¹⁷⁶

I believe the approach taken by Brockbank does not finally address the question of astrology's truth-status but rather relocates it. Thus, at the core of Brockbank's thesis is his assertion that in the evaluation of different explanations for the experience of astrology (apparently) working, the explanation of a Responsive Cosmos should be preferred to the explanation suggested by Dean et al – judgment errors, or reasoning errors.¹⁷⁷ But the question could then be asked, how one is to evaluate the truth of *that* assertion, without which, the idea of 'astrological truth' lacks a footing. Brockbank recognised this and discussed the issue at some length.¹⁷⁸ Although he did not explicitly draw on the major theories of truth in that discussion, the way he characterised the arguments could well be presented in terms of a coherence theory of truth, and the choice between coherence with science against coherence with religious experience. In summing up he stated that the idea of a Responsive Cosmos 'moves into an area which remains outside the scope of empirical enquiry, conducted in accordance with the strictures of science. Therefore, whether we accept it as a hypothesis becomes more a matter of belief'.¹⁷⁹

Brockbank's discussion is centred on the experience of astrologers, and the moment in chart interpretation when the astrologer 'sees that the astrological symbolism fits the context. The horoscope will [then] come alive and he/she will "know" that this interpretation is correct.'¹⁸⁰ This is what Cornelius refers to as 'the moment of astrology'.¹⁸¹ It is this direct experience which defines astrology – for Brockbank, if the 'moment' does not occur, astrology does not occur – and also guarantees the truth of

¹⁷⁵ Holbraad, 'Definitive Evidence', p. 105.

¹⁷⁶ Brockbank *Responsive Cosmos* p. 215.

¹⁷⁷ Brockbank, *Responsive Cosmos*, stated at p. 16; argument developed in chapter 5 (pp. 138 – 194).

Brockbank uses the term 'judgment errors' throughout; Dean et al often use the term 'reasoning errors', e.g. Phillipson, *Astrology Year Zero*, pp. 132 – 136.

¹⁷⁸ Brockbank, *Responsive Cosmos*, p. 190 – 4.

¹⁷⁹ Brockbank, *Responsive Cosmos*, p. 194.

¹⁸⁰ Brockbank, *Responsive Cosmos*, p. 110.

¹⁸¹ Brockbank states this at *Responsive Cosmos* p. 111. Cornelius's characterisation of the 'moment' is at e.g. Cornelius, *Moment of Astrology*, p. 295.

astrology. This raises a question however about the scope of Brockbank's astrological truth. The 'moment of astrology' as defined here is experienced only by a practising astrologer. If a client visits an astrologer, the interaction may well consist simply in the astrologer supplying them with propositional information. The question arises therefore of whether, under Brockbank's account of astrological truth, astrology might sometimes be true for astrologers but not true for the clients of those astrologers. This issue will be further considered in chapter 6.

3.3.4 Deflationary Theories of Truth

A type of theory about truth is the group of theories known as 'deflationary'. A simple way to characterise these theories is a negative one, namely, that they deny validity to the substantive theories of truth with which we have been concerned so far. Dorothy Grover stated that 'Deflationists... defend a thesis that is negative relative to the substantive versions of correspondence, coherence, and pragmatic theories.'¹⁸²

Kirkham stated, 'The deflationary thesis holds that there is no property of truth... since there is no such property as truth, there cannot be a theory of what truth is.'¹⁸³ It seems likely that this is what Kaufmann had in mind when he mentioned a fourth position, in addition to the main theories of truth, under which 'there is no truth'.¹⁸⁴

Deflationism only emerged as a major issue for epistemologists in the last century, but the basic idea has a longer history and can be found in a work by the thirteenth century scholar William of Sherwood (c. 1200 – c. 1262).¹⁸⁵ William argued, 'it is the same thing to say 'Socrates is running' and "it is true that Socrates is running", for if it is false that Socrates is running, then Socrates is not running.'¹⁸⁶ This exemplifies the redundancy theory, which is the simplest and oldest form of deflationism; other theories typically classified as deflationary include the performative theory, disquotationalism,

¹⁸² Dorothy Grover, 'On Locating Our Interest in Truth' in Richard Schantz (ed.), *What is Truth? (Current Issues in Theoretical Philosophy, Vol. 1)* (Berlin: de Gruyter, 2001) p.120.

¹⁸³ Kirkham, *Theories of Truth*, p. 107.

¹⁸⁴ Kaufmann, *Critique of Religion and Philosophy*, p. 76; pp. 74 – 6 for the three theories.

¹⁸⁵ Kretzmann gives William's dates as: born between 1200 – 1205; died between 1266 – 1272. William of Sherwood, Norman Kretzmann (tr.), *William of Sherwood's Introduction to Logic* (Minneapolis, University of Minnesota Press 1966) p. 3. William's thought is identified as deflationary by e.g. Marian David, 'Theories of Truth', pp. 378 – 9.

¹⁸⁶ William of Sherwood, *Introduction to Logic*, p. 41/I.23.

the prosentential theory and the minimalist theory.¹⁸⁷ These theories differ in the ways they frame the logical and semantic issues at stake, but agree on the essential deflationary principles that (as Lynch put it) ‘truth is a simple logical property with no underlying nature’, and that ‘truth is not a property that does any explanatory work’.¹⁸⁸ In what follows I will focus on the redundancy theory as a representative of all forms of the deflationary theory. The modern expression of this theory is generally traced to Frank P. Ramsey (1903 – 30) who defined it, much as did William of Sherwood, by observing that, ‘the propositional function *p* is true is simply the same as *p*’.¹⁸⁹ The idea was given wider currency by A. J. Ayer (1910 – 89), according to whom ‘the traditional conception of truth as a ‘real quality’ or a ‘real relation’ is due, like most philosophical mistakes, to a failure to analyse sentences correctly.’¹⁹⁰

Deflationism has been seen as a prelude to relativism or pluralism, which – as already seen above – is sometimes seen as opening the door to astrology and generally being a threat to civilisation. Thus for instance, Pascal Engel argued: ‘the danger to which we are exposed, with a deflationist theory, is that of an extreme *pluralism*... If truth were so radically pluralistic... We would just be happy to say that there is truth in astrology, in theology, in parapsychology, and all other pseudo-sciences.’¹⁹¹

¹⁸⁷ Following Michael P. Lynch, ‘Deflationary Views and their Critics: Introduction’ in Michael P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives* (Cambridge, Mass: MIT Press, 2001) pp. 422 – 428.

¹⁸⁸ Lynch, ‘Deflationary Views’, p. 427. Each of the four theories characterises the redundancy of the term ‘true’ in a different way, thus: *The performative theory* holds that the attribution of truth should be understood, not as a description, but as an action – an assertion or endorsement of an associated proposition; *Disquotationalism* characterises ‘true’ and its cognates as meaningful only in sentences which generalise – such as, ‘everything he said is true’. When specific information is conveyed, ‘true’ is redundant, so that e.g. the sentence ‘it is true that “snow is white”’ contains no significance beyond ‘snow is white’; *The prosentential theory* draws on grammatical analogy to suggest the term ‘true’ in ‘it is true’ is anaphoric. This is to say that its role is comparable to ‘so’ in ‘it is so’. Like ‘so’ in this context, ‘true’ in every context has no independent significance but depends for its sense on a framework of meaning which will (if the discourse is coherent) already have been established; *The minimalist theory* takes its primary orientation from logic. It contends that all there is to say about truth derives from instances of the equivalence schema, ‘*p* is true if and only if *p*’. A complete theory of truth would therefore be infinite, since it would by definition subsume every such axiom. The term ‘truth’ is then seen as useful precisely and only because its use (albeit as a generalisation) makes discussion less convoluted than would otherwise be the case.

¹⁸⁹ F. P. Ramsey in F. P. Ramsey and G. E. Moore, ‘Symposium: Facts and Propositions’ *Proceedings of the Aristotelian Society, Supplementary Volumes, Vol. 7, Mind, Objectivity and Fact* (1927) p. 158.

¹⁹⁰ A. J. Ayer, *Language, Truth and Logic* (2nd edn.) (Harmondsworth: Pelican, 1971 [1946]) p. 119. Ayer included a footnote acknowledging the influence of Ramsey’s contribution (at Ramsey and Moore, ‘Facts and Propositions’ pp. 142-3) on his thought here.

¹⁹¹ Pascal Engel, *Truth* (Abingdon: Routledge, 2014 [2002]) p. 59.

I am not aware of an instance in which a deflationary theory of truth is *explicitly* used to argue for a position regarding astrology's truth-status. Brockbank's approach to the truth of astrology is, in a significant sense, deflationary: under his account, in a proposition such as 'astrology is true' the words 'is true' would be redundant, because astrology by definition could not be false. That redundancy would entail deflationism.

A deflationary position is also sometimes approached when astrology is characterised as a language. Champion's research between 1999 and 2011 showed that the number of astrologers who would agree with the statement, 'astrology is a language', varied from 80.3% to 93% so clearly it is a popular perspective.¹⁹² It is common to find statements in astrology books along these lines: 'Astrology is a language. Learning astrology is like learning any foreign language.'¹⁹³ This sometimes becomes an epistemological position – as when, for instance, the astrologer Pam Gregory wrote about the experience of being asked if she really believed in astrology: 'This is a nonsensical question to me. It's like saying "You don't really believe in French, do you?" Astrology is a language... I can feel the same process happening in my brain whether I'm translating French or astrology. It is a language.'¹⁹⁴

Whilst it does not invoke deflationism in regard to truth generally, this position *is* deflationary with specific regard to astrology. To equate astrology with language in this way is to deny that it is the type of thing that could be true or false. This is not a tenable position however, because astrology as it is generally understood is not simply a language; if that metaphor is used, then astrology would also involve something or someone that communicates through astrology. The question that arises is, as Champion put it: 'If astrology is a language that we can read, then who – or what – is doing the writing?'¹⁹⁵ An answer to that question from Rudhyar, who was responsible for spreading the idea of astrology as a language, was that the natal horoscope is 'the

¹⁹² Champion, *Astrology and Popular Religion*, p. 181, Table 12.7.

¹⁹³ David Pond, *Mapping Your Romantic Relationships: Discover Your Love Potential (Astrology Made Easy)* (St. Paul, MN: Llewellyn, 2004) p. 4.

¹⁹⁴ Pam Gregory, *You Don't Really Believe in Astrology, Do You? How astrology can reveal profound patterns in your life*. (Bloomington: AuthorHouse, 2013) p. xiii

¹⁹⁵ Nicholas Champion, *What Do Astrologers Believe?* (London: Granta, 2006) p. 66.

message of the universe to you – a message in the celestial language of symbols.’¹⁹⁶

This involves more than a simple characterisation of astrology as a language.

For the most part, advocates of deflationary theories have assumed their position in the context of the twentieth century quest to distil and formulate the essence of truth. This is a quest whose trajectory is away from discussion of what particular things in the world are, and are not, true. This abstraction from real-world issues can be illustrated by reference to Richard Rorty (1931 – 2007). Rorty asserted that ‘truth is not the sort of thing we should expect to have a philosophically interesting theory about’, and on the basis of such statements is often characterised as holding a deflationary position.¹⁹⁷ Yet Rorty did not feel obliged by his reservations about truth to reserve judgement on astrology – witness his statement that ‘astrology is useless’, which, given his pragmatism, could reasonably be translated as ‘astrology is not true’.¹⁹⁸

In similar vein, Paul Horwich – an advocate of minimalism, and dubbed ‘king of the deflationists’ by one interviewer – remarked that “‘progress” is a notoriously slippery term’ and in order to illustrate the point stated, ‘There has presumably been ‘progress’ in the development of astrology, and acupuncture, and Talmudic law – as judged by those engaged in those practices. But skeptics about the point of being so engaged won’t be much impressed.’¹⁹⁹

It seems warranted to infer that Horwich’s sympathies are with the skeptics, and that his deflationism does not preclude him from evaluating the truth of astrology. Thus, whilst the quest for the ultimate truth about truth has led some philosophers to discard the term ‘truth’ itself, it seems likely that in their lived experience they would continue – as did

¹⁹⁶ Dane Rudhyar, ‘The Birth Chart as a Celestial Message from the Universal Whole to an Individual Part’ (talk given to the 1976 Convention of the American Federation of Astrologers)

<http://www.khaldea.com/rudhyar/astroarticles/celestialmessage.shtml> (accessed 25th June 2016). An earlier e.g. of the language analogy in Rudhyar’s work occurs at *Astrology of Personality*, p. 48.

¹⁹⁷ Richard Rorty, *Consequences of Pragmatism* (Minneapolis, MN: University of Minnesota Press, 1982) p. xiii. Rorty is characterised as deflationary by e.g.: Michael P. Lynch, *True to Life: Why Truth Matters* (Cambridge, MA: MIT Press, 2005), p. 105.

¹⁹⁸ Richard Rorty, ‘Pragmatism as Anti-Representationalism (Introduction)’ in John P. Murphy, *Pragmatism from Peirce to Davidson* (Boulder, Colo: Westview, 1990) p. 3. The full sentence is: ‘For to say that astrology is out of touch with reality cannot *explain* why astrology is useless; it merely restates that fact in misleading representationalist terms.’

¹⁹⁹ Paul Horwich, Richard Marshall (interviewer), ‘Deflationism and Wittgenstein’ (2014) <https://316am.site123.me/articles/deflationism-and-wittgenstein?c=end-times-archive> (accessed 22nd August 2019); Paul Horwich, ‘Williamson’s *Philosophy of Philosophy*’, *Philosophy and Phenomenological Research* Vol. LXXXII No. 2, March 2011, p. 525.

Rorty, and probably Horwich – to use ‘true’, ‘false’, and cognates thereof when faced by an issue such as the truth-status of astrology. William Alston, contemplating the semantic orientation of contemporary philosophers, observed that a man who was afraid of policemen would find no actual reassurance from the knowledge that ‘one could avoid locutions like “There is a policeman around the corner” in favor of “Policemanship is exemplified around the corner”’.²⁰⁰ Similarly, it seems unlikely that anyone concerned with the truth of astrology would be satisfied by being told that the word ‘truth’ was redundant. As Lynch remarks, ‘Just because one can dispense with a word doesn’t itself show anything about what does or doesn’t exist in the world.’²⁰¹ The sentences ‘astrology is true’ and ‘astrology is false’ may be somewhat problematic, and need clarification, but it is fundamental to the present thesis that they point to an issue which merits discussion and evaluation. I am therefore in sympathy with Scruton’s assessment of the redundancy theory: ‘The theory is... deeply unsatisfying: we do have an intuitive idea of what the classical theories are saying, and we recognise the choice between them as not only a real one, but the most fundamental choice in the whole of metaphysics.’²⁰²

3.3.5 Naïve Realism

Naïve realism is not a theory of truth, except insofar as it tends towards the view that theories of truth are not needed, giving it a certain resemblance to deflationism and making it apposite to discuss at this point. In Audi’s words, naïve realism ‘has been thought to represent common sense: it says roughly that perception is simply a matter of the senses telling us about real things.’²⁰³ This is a position that is sometimes adopted by Dean et al. In the 2016 book *Tests of Astrology*, they defined ‘Truth’ as follows in its glossary: ‘In this book truth is what ordinary people define as truth. It is true that you are reading this page and that Mars has no canals. It is not true that you are on Pluto and that rain never falls on New York.’²⁰⁴ Similarly, when I interviewed them in 2008 they asserted: ‘After all, in everyday life the meaning of “true” is pretty obvious,

²⁰⁰ William P. Alston, ‘Ontological Commitments’, *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, Vol. 9 No. 1/2 (Jan – Feb 1958) p. 13.

²⁰¹ Lynch, *True to Life*, p. 106. Lynch acknowledges that this statement ‘stems from’ that of Alston at p. 194 n. 18.

²⁰² Scruton, *Modern Philosophy*, p. 109.

²⁰³ Audi, *Epistemology: A Contemporary Introduction*, p. 38.

²⁰⁴ Geoffrey et al, *Tests of Astrology*, p. 462.

for example it is true that today is Thursday and you are watching BBC 2. Nobody feels the need to hedge such statements with theories of truth even when swearing on the Bible.’²⁰⁵

It is difficult to see how the obviousness of truth, and its being common currency for ‘ordinary people’, can be reconciled with other statements from Dean et al about the elusiveness of truth, for instance, ‘We want to avoid being misled, and avoiding being misled is part of what being scientific is about... Things are not always what they seem, a point most astrologers seem unaware of.’²⁰⁶ At this point a statement from Joseph Tolliver is relevant: ‘there would be no problem of knowledge if everything always had been, were, and always would be just as we believe it to be. In one way or another the problem of knowledge is motivated by our familiarity with the gap between appearance and reality.’²⁰⁷ The gap which Dean et al allege to exist between astrology’s appearance and its reality means that their approach is substantially predicated on the existence of an epistemological issue, and this undermines their invocation of naïve realism.

3.3.6 Epistemic Pluralism

Epistemic pluralism (sometimes called ‘alethic pluralism’) is the view that ‘the nature of truth is not uniform across domains’ as Pedersen put it.²⁰⁸ The insight in this position is that although it is often assumed that a valid theory of truth would need to apply in all situations, this may not in fact be the case. As Pedersen and Wright put it,

what property makes propositions true may vary across domains, or from subject matter to subject matter. Corresponding with reality might be the alethically potent property – the property that can make propositions true – when it comes to discourse about ordinary, concrete objects. On the other hand, cohering with the axioms of Peano arithmetic and being endorsed most widely might be the relevant properties for discourse about respectively arithmetic and the goodness of consumer goods.²⁰⁹

²⁰⁵ Dean et al, interview, 2008.

²⁰⁶ Dean et al quoted in Phillipson, *Astrology Year Zero*, p. 132.

²⁰⁷ Tolliver, ‘The St. Elizabethan World’, p. 160.

²⁰⁸ Nikolaj Jang Pedersen, ‘Stabilizing Alethic Pluralism’, *The Philosophical Quarterly* Vol. 60 No. 238 (January 2010), p. 92.

²⁰⁹ Nikolaj J. L. L. Pedersen and Cory D. Wright, ‘Introduction’ in Nikolaj J. L. L. Pedersen and Cory D. Wright (eds.), *Truth and Pluralism: Current Debates* (Oxford University Press, 2013) p. 2.

The origin of this perspective is often traced back to Hilary Putnam's 1994 paper, 'The Face of Cognition'.²¹⁰ The need for it may have arisen from the competitive enthusiasm that developed for theories of truth in the early twentieth century, for prior to that point it was normal to consider truth in different ways. For instance, David Hume (1711 – 1776) wrote: 'Truth or falsehood consists in an agreement or disagreement either to the *real* relations of ideas, or to *real* existence and matter of fact.'²¹¹ If it were transposed into contemporary terms, this could easily be interpreted as advocating both the coherence theory ('relations of ideas') and the correspondence theory ('matter of fact') within a single sentence. The main point here is that there used not to be a problem with an individual philosopher deploying different models of truth in different situations. A subsidiary point was well made by Margaret Wilson when, after surveying a range of differing opinions regarding Spinoza's affiliation to different theories of truth, she concluded that it was 'unproductive to try to type his views in relation to this rather anachronistic contrast'.²¹²

Although epistemic pluralism is often seen as an epistemological innovation of the early 21st century (as when, for instance, Lynch's *Truth as One and Many* was reviewed as offering 'a new theory of truth'), it can also be seen as a return to the approach that was implicitly assumed by most philosophers before the 20th century.²¹³ It is also an articulation of the position explicitly advocated by the early exponents of pragmatism, Peirce and particularly James:

There is nothing improbable in the supposition that an analysis of the world may yield a number of formulae, all consistent with the facts. [...] Why may there not be different points of view for surveying [the world], within each of which all data harmonize... A Beethoven string-quartet is truly, as someone has said, a scraping of horses' tails on cats' bowels, and can be exhaustively

²¹⁰ Hilary Putnam, 'Dewey Lectures, Lecture III: The Face of Cognition', *The Journal of Philosophy* Vol. 91 No. 9, Sept 1994, pp. 488 – 517. Cited as the first instance of alethic pluralism by e.g. Michael P. Lynch, 'Primitivism, Identity Theory, and Alethic Pluralism: Introduction' in Lynch (2001) p. 618.

²¹¹ David Hume, Ernest C. Mossner (ed.), *A Treatise of Human Nature* (Harmondsworth: Penguin, 1969 [1739 – 40]) p. 510/Book III Part 1 Sect. 1. Original emphases.

²¹² Margaret D. Wilson, 'Spinoza's theory of knowledge' in Don Garrett (ed.), *The Cambridge Companion to Spinoza* (Cambridge University Press, 1996) p. 135 n. 25.

²¹³ Nicholas J. J. Smith, 'Book Reviews: Truth as One and Many by Michael P. Lynch', *Analysis* Vol. 70 No. 1 (January 2010) p. 191.

described in such terms; but the application of this description in no way precludes the simultaneous applicability of an entirely different description.²¹⁴

The status of Peirce and James as epistemic pluralists is sometimes acknowledged by contemporary commentators, and I will consider this subject further as part of my discussion of the pragmatic conception of truth in chapter 7 of this thesis.²¹⁵

3.3.7 The Complexity of the Three Theories of Truth

As I have already indicated, the idea of there being three major theories of truth is a simplification. There are other theories, some of which I have just discussed. In addition, the closer one looks the greater the number of variant versions of each of the three theories of truth there are to be found. The distinctions involved are typically abstruse and – I contend – of little or no relevance to the discussion of astrology’s truth-status, and accordingly I will give just an indication of the conceptual proliferation in this section.

Bertrand Russell acknowledged that he revised the way he thought the correspondence theory should be formulated, under the influence of William James.²¹⁶ The case has been made that Russell’s characterisation of this theory actually varied many more times.²¹⁷ A full account of the variants of the correspondence theory would require considerably more description.²¹⁸

The coherence theory of truth is similarly subject to a wide range of slightly differing accounts. Thus for example Richard Fumerton argued:

²¹⁴ William James, *The Will to Believe and Other Essays in Popular Philosophy* in: William James, Gerald E. Myers (ed.), *William James: Writings 1878 – 1899* (New York, NY: The Library of America, 1992 [1896]), p. 513.

²¹⁵ James is characterised as an alethic pluralist in: José M. Medina, ‘James on Truth and Solidarity’ in John J. Stuhr (ed.), *100 Years of Pragmatism: William James’s Revolutionary Philosophy* (Bloomington, IN: Indiana University Press, 2010) p. 135; James and Peirce are both characterised as alethic pluralists in Anker, *Truth in Marketing*, p. 20.

²¹⁶ Bertrand Russell, *My Philosophical Development* (New York: Simon & Schuster, 1959) p. 181.

²¹⁷ Mosteller, *Theories of Truth*, pp. 117 – 9.

²¹⁸ E.g. Kirkham, *Theories of Truth*, devotes fifteen pages to this, pp. 119 – 134.

One gets different versions of a coherence theory of truth depending on how one uses belief to restrict the relevant class of propositions with which a proposition must cohere in order to be true.’²¹⁹

He went on to suggest that six major variants of coherence theory could be characterised, depending on who holds the belief, at what time the belief is held, and what process of enquiry informed said belief.²²⁰

In the account, above, of the pragmatic theory of truth I noted two major forms of pragmatism, deriving from Peirce and from James. Many more forms have, however, been considered to exist by some commentators. This can be seen from the title of Arthur O. Lovejoy’s article from 1908, ‘The Thirteen Pragmatisms’, and yet more from a response to Lovejoy published later that year, ‘The Exact Number of Pragmatisms’ in which Max Meyer concluded that ‘there are as many pragmatisms as there are pragmatists’.²²¹ Meyer’s observation was reiterated by the pragmatic philosopher, friend and associate of William James, F. C. S. Schiller in 1927 and it is frequently encountered in contemporary accounts of pragmatism, usually attributed to Schiller.²²² More recently the philosopher Richard Bernstein (1932-) has argued (in a commentary on the thought of philosopher Richard Rorty (1931 – 2007), which met with Rorty’s approval), ‘I do not think there is any “essence” to pragmatism – or even a set of sharply defined commitments or propositions that all so-called pragmatists share’ and that ‘the

²¹⁹ Richard Fumerton, *Metaepistemology and Skepticism* (Lanham, MA: 1995) p. 136

²²⁰ Fumerton, *Metaepistemology*, p. 136.

²²¹ Arthur O. Lovejoy, ‘The Thirteen Pragmatisms (I & II), *The Journal of Philosophy, Psychology and Scientific Methods*, Vol.5, No.1 (2nd January 1908), pp. 5-12, and Vol.5 No.2 (16th January 1908), pp.29-39.

Max Meyer, ‘The Exact Number of Pragmatisms’, *The Journal of Philosophy, Psychology and Scientific Methods* Vol.5, No.12 (4th June 1908), pp.321-326; quotation from p.326.

²²² F.C.S. Schiller, ‘William James and the Making of Pragmatism’, in F.C.S. Schiller, *Must Philosophers Disagree? And Other Essays in Popular Philosophy* (London: Macmillan and Co, 1934), p.104; article originally published in *The Personalist*, 8 (1927), pp.81 – 93. Schiller does not cite Meyer, but does refer to Lovejoy’s 1908 article and this, together with the similarity of his expression (‘there might be as many pragmatisms as there were pragmatists) to that of Meyer makes it plausible that Schiller had read Meyer’s article. For attribution of ‘as many pragmatisms...’ simply to Schiller: e.g. Susan Haack, ‘Pragmatism,’ in: Nicholas Bunnin, E. P. Tsui-James (eds.), *The Blackwell Companion to Philosophy* (2nd edn.) (Malden, MA: Blackwell, 2003 [1996]), p. 775; Sandra B. Rosenthal, Patrick L. Bourgeois, *Pragmatism and Phenomenology: A Philosophic Encounter* (Amsterdam: B. R. Gruner, 1980) p.5. Nicholas Rescher mistakenly attributed ‘as many pragmatisms...’ to Lovejoy: Nicholas Rescher, *Studies in Pragmatism (Collected Papers II)* (Heusenstamm, Germany: Ontos Verlag, 2005) p.75

pragmatic movement has always been characterized by a conflict of narratives and metanarratives.²²³

3.3.8 Conclusion

This chapter has surveyed a world of philosophical detail. I have argued that, in terms of philosophical principle, it is at least plausible that the three theories of truth will suffice as a basis upon which to evaluate astrology's truth-status. At the least, none of the other positions I have touched on offers a compelling case for inclusion. I have also cited precedents in which studies of truth – more or less comparable to this one – have used the three theories.

On this basis I will proceed with the working hypothesis that the three theories suffice for my purpose. This will be tested at a practical level as numerous astrological examples are tested in the following chapters, four through seven.

²²³ Richard Bernstein, 'The Conflict of Narratives' in Herman J. Saatkamp Jr. (ed.), *Rorty & Pragmatism – The Philosopher Responds to His Critics* (Nashville: Vanderbilt University Press, 1995) p.61, p.66. Rorty registered his approval of Bernstein's perspective in his 'Response to Richard Bernstein', pp.68 – 71 of the same volume.

Chapter 4: Correspondence Theory

4.1 Introduction to the Correspondence Theory

In this chapter I will define the correspondence theory of truth and consider the ways in which it has been, and can be, applied to the evaluation of astrology's truth-status. Historically, this has often involved tests of astrology and therefore several tests will be outlined on an indicative basis: which is to say that, given the philosophical focus of this thesis, I will not attempt to give a comprehensive account of these tests, but will include sufficient detail only to show the epistemological issues arising from them.

The correspondence theory defines truth as correspondence between a proposition and a fact – as, for example, the proposition 'snow is white' is made true by the fact of snow's whiteness.¹ One of the theory's main advocates, Bertrand Russell, characterised it as a way to avoid error: 'Since erroneous beliefs are often held just as strongly as true beliefs, it becomes a difficult question how they are to be distinguished from true beliefs. How are we to know, in a given case, that our belief is not erroneous?'² Russell's proposed way of avoiding error was to preclude the human mind from the definition of truth. Consequently truth's independence from mind is central to his definition of the correspondence theory:

minds do not create truth or falsehood. They create beliefs, but when once the beliefs are created, the mind cannot make them true or false, except in the special case where they concern future things which are within the power of the person believing, such as catching trains. What makes a belief true is a *fact*, and this fact does not (except in exceptional cases) in any way involve the mind of the person who has the belief.³

Further, Russell – espousing a position similar to that of Peirce, cited in chapter 3 – preferred science to philosophy as the arbiter of truth: 'It seems to me that science has a much greater likelihood of being true in the main than any philosophy hitherto advanced (I do not, of course, except my own). In science there are many matters about which

¹ The example of snow, from Horwich, 'Theories of Truth', p. 510 was cited in the previous chapter.

² Russell, *Problems of Philosophy*, p.69.

³ Russell, *Problems of Philosophy*, p.130.

people are agreed; in philosophy there are none.’⁴ There is a snag in this passage which will echo through this chapter: the assertion that science should be preferred to philosophy is itself a philosophical one, so to that extent Russell *was* excepting his own philosophy from his critique of the genus. The application of scientific tests to astrology sees metaphysical questions (such as the definition of ‘fact’) arise and challenge hopes of reaching certainty through science alone. As John Passmore (1914 – 2004) put it, ‘throw metaphysics into the fire, and science goes with it, preserve science from the flames and metaphysics comes creeping back.’⁵

Such considerations notwithstanding, science is often intertwined with the correspondence theory, as it was for Russell. This follows from the realist ontology that usually underpins the theory. In the words of Schantz, ‘This theory is typically and naturally associated with metaphysical realism – the view that there is an objective reality, a reality whose existence and structure are independent of our language and thought.’⁶ Jeffrey Ketland described it as an ‘attractive feature of a correspondence view’ that ‘it permits truth to depend upon mind-independent reality.’⁷ Specifically, this makes the correspondence theory attractive to commentators who seek to defend science as the ultimate arbiter of truth – and indeed in such quarters it is often simply presupposed. Thus for example Alan Sokal and Jean Bricmont (professors of mathematics and physics respectively) wrote that: ‘scientists rarely use the word “realist”, because it is taken for granted: *of course* they want to discover (some aspects of) how the world really is! And *of course* they adhere to a “correspondence” notion of truth (again, a word that is barely used)...’⁸

In similar vein, when the professor of philosophy George Englebretsen championed correspondence theory in 2006, he characterised it as a way to ‘objective, non-relativistic truth about the world, the kind of truth worth attaining’, which was also

⁴ Bertrand Russell, ‘Logical Atomism’ in J. H. Muirhead (ed.), *Contemporary British Philosophy: Personal Statements (First Series)* (London: George Allen & Unwin, 1924) p. 377

⁵ Passmore, *Hundred Years of Philosophy*, p. 392.

⁶ Richard Schantz, ‘Introduction’ in Richard Schantz (ed.), *What is Truth?* (Berlin: de Gruyter, 2002) p. 2.

⁷ Jeffrey Ketland, ‘Truth’ in John Shand (ed.), *Central Issues of Philosophy* (Chichester: Wiley-Blackwell, 2009) p. 12.

⁸ Alan Sokal and Jean Bricmont, ‘Defense of a modest scientific realism’ in Martin Carrier, Johannes Roggenhofer, Günter Küppers, Philippe Blanchard (eds.) *Knowledge and the World: Challenges Beyond the Science Wars* (Berlin: Springer, 2004) p. 21; Sokal, p. 233. Original emphases.

‘what science cares about’.⁹ He characterised this position as an antidote to the ideas of ‘Postmodernists and New Agers’, whose ideas he saw as ‘a hodgepodge of intellectually viral memes’ with ‘a built-in avoidance reaction to *facts* and an intolerance of even the notions of *fact* and *truth*.’¹⁰ Englebretsen saw this dichotomy between science and postmodernism as having been epitomised in the debate that occurred in the 1990’s about the epistemological role of science, which came to be known as the ‘science wars’.¹¹

The realist version of the correspondence theory, typically characterised as a way of avoiding error, is central for most critics of astrology, as articulated for instance by Dean et al:

we [i.e. humanity] are so bad at judging correspondences. Even if the correspondence is strong, as between human height and weight, we are still bad at judging it accurately. We can also see correspondences where none actually exist, so a system such as phrenology can seem to work even though it does not. This is why researchers have to be so careful. They cannot afford to be misled.¹²

As has already been described, this led Dean et al to undertake their own tests into astrology, in order to find out whether the subjective impression of correspondences between horoscopes, and character traits and events, stood up to scrutiny.¹³ In doing so, as was seen in chapter 2, they took the position that ‘to adequately test astrology the participation of the astrologer must be eliminated.’¹⁴ The desideratum of excluding subjectivity accords with the typical, realist, version of correspondence theory advocated by Russell.

⁹ Englebretsen, *Bare Facts and Naked Truths*, p. 150.

¹⁰ Englebretsen, *Bare Facts and Naked Truths*, p. 8, p. 7. Original emphases.

¹¹ Englebretsen, *Bare Facts and Naked Truths*, p. x. For an overview of the science wars see e.g.: Ullica Segerstråle, ‘Science and Science Studies: Enemies or Allies’ in Ullica Segerstråle (ed.), *Beyond the Science Wars: The Missing Discourse about Science and Society* (Albany, NY: SUNY Press, 2000) particularly pp. 1 – 25.

¹² Dean et al quoted in Phillipson, *Astrology Year Zero*, p.135.

¹³ Phillipson, *Astrology Year Zero*, p. 125.

¹⁴ Dean et al, *Recent Advances*, p.554.

4.1.1 Intuition as a Problem

It is relevant at this juncture to define how subjectivity and mind are characterised in discussions of astrology; what, therefore, it would mean to eliminate the participation of the astrologer. The essential idea is that in order to evaluate the existence of correspondences between horoscopes and biographical traits and events, the role of the astrologer should be restricted to the deductive processing of horoscopes in terms of established rules. Such a process would be replicable, and could – in principle at least – be performed by a computer program. The involvement of an astrologer’s mind at a purely deductive level is not generally seen as a problem.

The point at which mind becomes a problem is when what is often referred to as intuition appears, or is suspected to appear. The central idea behind intuition, as formulated by the professor of human development and consciousness studies Marcie Boucouvalas, is that it ‘represents a way of direct knowing that seeps into conscious awareness without the conscious mediation of logic and the rational process. What is claimed here is a way of knowing outside the conscious rational/logical/analytic process.’¹⁵ Or, as Jung put it: ‘In intuition a content presents itself whole and complete, without our being able to explain or discover how this content came into existence.’¹⁶ These definitions make clear that the provenance of intuition is innately difficult or impossible to define, and it is this quality that is problematic for the realist correspondence account when applied to astrology. It makes it possible that any given ‘astrological proposition’ that an astrologer pronounces may not have been arrived at through astrology. Hence, from a realist perspective, the involvement of intuition serves only to erode the integrity of the three terms of correspondence – the proposition, the relationship of correspondence, and the fact to which a proposition would correspond – thereby making it difficult or impossible to test astrology. This is why intuition is sometimes seen as a problem to be excluded at all costs – as when, for instance, I asked the former astrologer Terry Dwyer what changes he would like to see

¹⁵ Marcie Boucouvalas, ‘Intuition: The Concept and the Experience’ in Robbie Davis-Floyd and P. Sven Arvidson (eds.), *Intuition: The Inside Story* (New York: Routledge, 1997) p. 7. This definition is in accord with that used by e.g. Dean et al at Phillipson: *Astrology Year Zero*, pp. 137 – 9.

¹⁶ C. G. Jung; R. F. C. Hull, H. G. Baynes (trs.), *Psychological Types (Collected Works of C. G. Jung Vol. 6)* (Princeton, NJ: Princeton University Press, 1971) p. 453 [770].

within the world of astrology, and he said: ‘a proper scientific attitude and the abolition of so-called intuition.’¹⁷

The potential for dispute regarding the source of propositions is a problem that does not generally arise in epistemological discussion. It arises here because, as was discussed in chapter 3, it is not possible to address the question ‘astrology: true or false?’ directly. It is necessary to evaluate specific astrological propositions and extrapolate from these to a conclusion regarding astrology per se; and when those propositions come from astrologers, the possibility arises that some or all of said propositions should not be attributed to astrology, but to something else – with ‘intuition’ often doing service for this ill-defined ‘something else’. This in turn raises questions such as, how astrology should be defined, and whether indeed it is valid to segregate it from intuition.

Campion found that, at three astrological conferences, the percentage of astrologers who agreed with the statement ‘Intuition is necessary for a good astrological reading’ was 81.1%, 64.5% and 80%.¹⁸ In terms of astrologers’ experience, therefore, there is a good case not to segregate intuition from astrology. The epistemological status of intuition, and its relevance to astrology, are large questions that are bound up with the models of astrology-as-science, and astrology-as-divination, that have already been discussed in this thesis and that will be treated in detail in the following two chapters. Whilst it is not possible to discuss the correspondence theory without some reference to intuition, therefore, a full treatment must be deferred to chapter 6 of this thesis.

The correspondence theory of truth has been criticised by many philosophers, and as this chapter progresses I will examine the principal issues. These are summarised in Horwich’s critique of the basic idea of correspondence between proposition and fact: ‘if it is to provide a rigorous, substantial, and complete theory of truth... then it must be supplemented with accounts of what facts are, and what it is for a belief to correspond to a fact; and these are the problems on which the correspondence theory of truth has foundered.’¹⁹ Since the realist version of the correspondence theory has been the dominant one in the history of philosophy, and also since it underpins most criticisms of

¹⁷ Terry Dwyer interview.

¹⁸ Campion, *Astrology and Popular Religion*, p. 181, table 12.7 (ix). The conferences were, respectively, in the UK in 1999; in the USA in 2001; and in the UK in 2011.

¹⁹ Horwich, ‘Theories of Truth’, pp. 772 – 3.

astrology's truth-status, I will focus on that interpretation for most of this chapter. The alternative, a non-realist correspondence theory, will be discussed in section 4.3.

4.2 The Realist Version of Correspondence Theory

When the correspondence theory is applied to astrology, it brings with it the issue of what it is that might correspond to a fact in the world: what element of astrology will take the role of the proposition, whose correspondence to fact constitutes truth. The most basic option is to consider a simple combination from the horoscope – for instance, the planet Mars and its diurnal position (usually defined as one of twelve sectors, the astrological ‘houses’). Such simple combinations are what differentiate one horoscope from another; every horoscope has the planet Mars and a sector of roughly 30° below the western horizon known as the ‘first house’, but only one in twelve (roughly) will have Mars *in* the first house. There are many astrology books that provide descriptions of such simple combinations: planets in signs, planets in aspect to one another, planets in houses and so on. Books of this type are widely referred to as astrological ‘cook-books’ by astrologers.²⁰ Thus for example a book written by Alan Leo in 1908 defined Mars in the first house as giving ‘strength and courage to the native, and when rising [it] always makes him confident of his abilities; sometimes too consequential and assertive’.²¹ Seven decades later, the corresponding section in a work by Frances Sakoian and Louis S. Acker stated that ‘This position of Mars gives a love of sports and other forms of strenuous physical exertion. The body is often robust and muscular, with an appearance of strength and ruggedness.’²²

This type of correspondence between simple astrological combinations and facts in the world has a long history, being found in some of the earliest records of astrological readings – from Mesopotamia before the 7th century BCE, for instance: ‘When Mars approaches Scorpio, the prince will die by a scorpion’s sting (or) will be captured in his

²⁰ A fact remarked by Bird, *Astrology in Education*, p. 183 and p. 183 n. 153.

²¹ Leo, *How to Judge a Nativity*, pp. 103 – 4.

²² Frances Sakoian and Louis S. Acker, *The Astrologer’s Handbook* (London: Penguin, 1981 [1974]) p. 154.

palace...'²³ When they discuss the subject's origins, astrologers often assert that it began with the observation of just such correspondences, for instance: '[astrology] began when events in the sky were first observed to affect events here on Earth'.²⁴ It is thus plausible that such simple astrological combinations should be taken as the 'propositions' whose correspondence to facts about people and the world they inhabit would determine the truth-status of astrology.

4.2.1 The Work of the Gauquelins

Michel Gauquelin (1928 – 1991) and Françoise Gauquelin (1929 – 2007) undertook the best-known and most substantial analysis so far conducted of correspondences between simple astrological combinations and facts in the world. Gauquelin characterised his approach as seeking an answer to one question: 'Is it possible to observe common positions in heavenly bodies for the births of individuals who have manifested common tendencies throughout their lives?'²⁵ Individuals' occupations seemed promising as 'a precise activity in human life which can be observed from the outside, that is to say, objectively.'²⁶ He excluded employment in (for instance) construction work and banking on the grounds that one may do such work without having any deep connection to it; 'I chose the occupations which are above all an objective manifestation of a personal interest, a powerful vocation... science, art, politics, war, and so on.'²⁷ The Gauquelins thus aimed at the evaluation of correspondences between simple combinations in the horoscope and features of the lives of the subjects to whom the horoscopes belonged, focusing on those that were a matter of public record. As far as possible, therefore, subjective judgement was excluded and their approach could exemplify the realist correspondence theory of truth in action.

²³ R. Campbell Thompson, *The Reports of the Magicians and Astrologers of Nineveh and Babylon in the British Museum: Vol. II, English Translations, Vocabulary Etc* (London: Luzac and Co, 1900), No. 272 p. lxxxviii.

²⁴ Rick Levine, Jeff Jawer, *Your Astrology Guide 2010* (New York: Sterling, 2009) p. 14.

²⁵ Michel and Françoise Gauquelin pursued much research jointly and a number of texts were published under both their names. In referring to the author(s), as with e.g. 'his approach' here, I have followed the form of identification used in the text concerned. Michel Gauquelin, Gillian Hargreaves (tr.), *Written in the Stars: The Proven Link Between Astrology and Destiny* (Wellingborough: Aquarian, 1988) p. 42. This book comprises Gauquelin's first two books: *L'Influence des Astres – Etude Critique et Expérimentale* (Paris: Editions du Dauphin, 1955); and *Les Hommes et Les Astres* (Paris: Denöel, 1960), in English translation.

²⁶ M. Gauquelin, *Written in the Stars*, p. 42.

²⁷ M. Gauquelin, *Written in the Stars*, p. 43.

The Gauquelins collected and analysed a huge amount of data. Towards the end of his life, Michel Gauquelin referred to ‘having collected half a million dates of birth from the most diverse people’.²⁸ Collections from their work totalling 145,228 timed births are now available online.²⁹ From all this data, the most persuasive evidence of an astrological correspondence was found in an analysis of the birth charts of 1,485 sports champions. This showed a preponderance of Mars placements in the 12th and 9th houses (respectively the 10 o’clock and 1 o’clock positions in Figure 2 below), which Gauquelin estimated to have a probability of occurring by chance of less than one in five million.³⁰

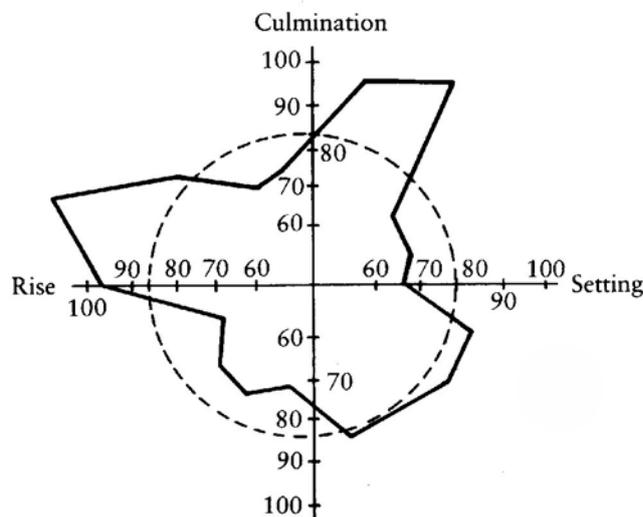


Figure 2: Distribution of Mars in 1,485 sports champions' horoscopes³¹

This came to be known as the ‘Mars effect’ and was the strongest instance of a correspondence that Gauquelin discovered, though there were others: Jupiter with politicians and actors, and Saturn with scientists, for instance.³² These findings however were the exception rather than the rule; Gauquelin found these effects only appeared in the case of individuals who were eminent in the relevant field.³³ Further,

²⁸ Michel Gauquelin, *Neo-Astrology: A Copernican Revolution* (London: Arkana, 1991), p.20.

²⁹ Michel and Françoise Gauquelin, curated by Patrice Guinard, ‘Archives Gauquelin: Birth and Planetary Data gathered since 1949: <http://cura.free.fr/gauq/17archg.html> (2015 [2001 – 2]) (checked 23rd August 2019).

³⁰ M. Gauquelin, *Written in the Stars*, p. 111.

³¹ From M. Gauquelin, *Written in the Stars*, p. 111, figure 20.

³² M. Gauquelin, *Written in the Stars*, p. 16 for ‘Mars effect’, p. 17 for Jupiter and Saturn.

³³ M. Gauquelin, *Written in the Stars*, pp. 72 – 7.

the majority of astrological factors, such as zodiacal signs and geometric ‘aspects’ between horoscopic factors did not have any significant correspondence in the lives of people.³⁴ Further, the effects disappeared for people born after 1950 – a fact which Gauquelin tentatively attributed to the increase of medical intervention in births after that date, resulting in children being born at what was in effect the wrong time: ‘medical interference annihilates the influence of the cosmic indicator.’³⁵ In his last book, Gauquelin summed up his findings:

I have been able to observe that the majority of the elements in a horoscope seem not to possess any of the influences which have been attributed to them. Is astrology then based on erroneous premises? Not entirely, I believe. Although there is a large percentage of errors, a small percentage of facts remain correct, as elusive as a grain of sand lost in the sand...³⁶

The response to the Gauquelin findings of Suitbert Ertel – a professor of psychology and sometime collaborator with Geoffrey Dean – shows their potential impact:

For a long time, I had been reluctant to consider astrological claims worthy of any scientific attention. I thought they would never find empirical support. I stumbled over Gauquelin data, incidentally, but my prejudice prevented me from examining his work in any detail. Finally, after ten years of procrastination, I decided to give him a "fair trial". The results of thorough subsequent research (Ertel, 1988) forced even a hard-headed skeptic like me to abandon my previous mind-set.³⁷

The reception for the Gauquelins’ findings has been polarised. Commentators sympathetic to astrology have tended to exaggerate their significance as when, for instance, John Anthony West wrote: ‘thanks to Michel Gauquelin, astrologers now know that in principle astrology is justified.’³⁸ On the other side there have been numerous critiques which have denied all validity to the Gauquelins’ findings. The most high-profile of these came from three three skeptic groups: The Comité Belge pour l’investigation scientifique des phénomènes réputés paranormaux (often shortened to

³⁴ M. Gauquelin, *Written in the Stars*, pp. 251 – 3.

³⁵ Michel Gauquelin, Sarah Matthews (tr.), *The Truth about Astrology* (Oxford: Blackwell, 1983) p. 147.

³⁶ M. Gauquelin, *Neo-Astrology*, p.20.

³⁷ Suitbert Ertel, interview. Reference, supplied by Ertel, is: Suitbert Ertel, ‘Is there no Mars effect? The CFEPP’s verdict scrutinized with the assistance of six independent researchers.’ *Correlation* 17 (2), (1998/99), pp.4-23.

³⁸ John Anthony West, *The Case for Astrology* (London: Penguin, 1992 [1970]) p. 318.

‘Comité Para’); the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP – renamed CSI, the Committee for Skeptical Inquiry, in 2006); and the Comité Français pour l’Étude des Phénomènes Paranormaux (CFEPP). These groups’ analyses of the Gauquelin findings, and their attempts to replicate them, involved failings that could be attributed to incompetence or bias.³⁹ Thus in their study of astrology, the psychologists Hans Eysenck (1916 – 97) and David Nias concluded that

the critics [of the Gauquelins] have often behaved in an irrational and scientifically unusual manner, violating principles they themselves have laid down, failing to adhere to their own rules... We have not found any similar misdemeanour on the part of the Gauquelins, who seem to have behaved throughout in a calm, rational and scientifically acceptable manner...⁴⁰

In a detailed analysis of flawed critiques of the Gauquelin work, Ertel argued that six tactics were employed to skew the findings against the Gauquelins: ‘Set up an insufficient design’; ‘Collect unfavourable data’; ‘Prevent positive results from emerging’; ‘Ignore positive results’; ‘Obliterate positive results by reinterpretation’, and as a last resort, ‘shotgun attacks’, meaning an indiscriminate seizing upon minor issues in order to create an unjustified impression of fatal damage to the findings.⁴¹ More recently, Dean et al provided a parallel account of attempts to undermine the Gauquelin work, concluding that in their critiques, the skeptic groups each ‘behaved less like scientists and more like a secret society with an agenda.’⁴² All such attempts to rebut the Gauquelins’ findings have thus far failed, and the Mars effect (and other similar planetary effects) remain as facts in need of explanation.⁴³ Michel Gauquelin lamented the arduous path that he and his wife Françoise had faced in conducting their research, and subsequently in defending their findings against what he described as ‘hostilities’

³⁹ For accounts: Suitbert Ertel and Kenneth Irving, *The Tenacious Mars Effect* (London: Urania Trust, 1996), particularly pp. KI – 14 to KI – 32, and pp. SE – 13 to SE – 46, Dean et al, *Tests of Astrology*, pp. 79 – 83.

⁴⁰ H. J. Eysenck, D. K. B. Nias, *Astrology: Science or Superstition?* (London: Maurice Temple Smith, 1982), p. 202.

⁴¹ Suitbert Ertel, ‘How to Suppress the Gauquelin Mars Effect?’, *Correlation* Vol. 15 No.1 (Northern Summer 1996), pp. 2 – 17. The four forms of malpractice are presented as section headings at: p. 6, p. 7, p. 9, p. 11, p. 12.

⁴² Dean et al, *Tests of Astrology*, p. 83.

⁴³ In the interests of brevity I have not included an attack on the Gauquelin work based on possible bias in the selection of data, which was eventually rebutted – as discussed in: Kollerstrom, ‘How Ertel Rescued the Gauquelin Effect’.

from numerous critics, who often seemed to be motivated by a desire to overturn Gauquelin's findings at any price.⁴⁴ Hence Ertel's assertion: 'My impression is that research on extraordinary claims, conducted by prominent members of skeptical organizations... is likely to suffer from bias and fact-distorting procedures.'⁴⁵ When there are difficulties in policing the definition of 'fact', the seemingly simple idea of truth being characterised by correspondence between proposition and fact will become contentious and fraught.

4.2.1.1 The Gauquelins' Work and Interpretive Inertia

The anthropologist Tanya Luhmann coined the term 'interpretive drift' which she defined as the 'often unacknowledged shift in someone's manner of interpreting events as they become involved with a particular activity.'⁴⁶ On a similar basis, by 'interpretive inertia' I refer to a tendency for people – specifically, here, critics of astrology – to resist shifting their interpretive model, despite that model being challenged by data such as the Gauquelin findings. The ways in which interpretive inertia can manifest ranges from the discreetly dismissive to the confrontational and accusatory.

Thus for example, at the discreet end of the spectrum, Richard Dawkins stated that astrology needed the support of 'good evidence (i.e. better than the often quoted but non-robust Gauquelin attempt)' but gave no reason for regarding the Gauquelin work as 'non-robust'.⁴⁷ Alan Sokal justified his similarly dismissive attitude by citing a book by Benski et al which he called 'a critical and detailed factual examination of the "Mars effect"'.⁴⁸ That work was however based on the study by the CFEPP, mentioned above,

⁴⁴ Gauquelin, *Neo-Astrology* p. 38; pp. 32 – 40 for his account of attacks on his work.

⁴⁵ Suitbert Ertel, 'Appraisal of Shawn Carlson's Renowned Astrology Tests', *Journal of Scientific Exploration*, Vol. 23, No. 2, (2009) p. 134.

⁴⁶ Luhmann, *Persuasions of the Witch's Craft*, p. 312.

⁴⁷ Dawkins, 'The Real Romance in the Stars', *The Astrological Journal* (Vol. 38 No. 3, May/June 1996) p. 140 n. 4. The comment was added to this reprinted version of the article, and did not appear in the original.

⁴⁸ Alan Sokal, 'Pseudoscience and postmodernism: Antagonists or fellow-travelers?' in Garrett G. Fagan (ed.), *Archaeological Fantasies: How Pseudoarchaeology Misrepresents the Past and Misleads the Public* (Routledge: London, 2006) p. 357 n. 128; reprinted in: Alan Sokal, *Beyond the Hoax: Science, Philosophy and Culture* (Oxford: Oxford University Press, 2008), p. 332 n. 233. The text referred to is: Claude Benski et al, *The Mars Effect: A French Test of over 1,000 Sports Champions* (Amherst, NY: Prometheus, 1996).

with critical flaws that had been publicly recognised for ten years before the publication of Sokal's article; flaws described by Ertel as amounting to 'a remarkable example of how facts may become distorted by the abuse of scientific tools.'⁴⁹

Interpretive inertia thus causes people to depart from a primary requirement of the correspondence theory of truth – namely that facts alone should determine what is and is not true. This can be further illustrated with exchanges between a group comprised of Barry Barnes, David Bloor and John Henry – professors of sociology, science studies and history of science respectively – and professor of physics David Mermin. In their book *Scientific Knowledge: A Sociological Analysis*, Barnes, Bloor and Henry wrote: 'Michel Gauquelin's statistical evidence in support of astrology would perhaps be a serious embarrassment to scientists if they were not so good at ignoring it. But one day it could conceivably come to be accommodated as a triumph of the scientific method.'⁵⁰ In reviewing the book, Mermin reported that it had prompted him to spend an hour 'leafing through' *The Truth About Astrology* by Gauquelin. He remarked: 'The correlations described there between planetary positions at the minute of birth and subsequent careers in medicine are absolutely amazing – far beyond what could happen by chance...'⁵¹

Mermin went on to question whether this called for a major re-assessment of our understanding of the world, or whether there could be 'a simpler explanation'; 'could it be that the book is a work of fiction?'⁵² In a subsequent article, with specific reference to the above suggestion, Bloor wrote: 'notice that (short of attempting to replicate the work) Mermin is not in a position to say this other than by taking for granted the acceptability of current forms of understanding.'⁵³

⁴⁹ Ertel in Ertel and Irving, *Tenacious Mars Effect*, p. A1 – 11. A full account is at pp. A1 – 1 to A1 – 15; also at Dean et al, *Tests of Astrology*, pp. 82 – 3.

⁵⁰ Barry Barnes, David Bloor & John Henry, *Scientific Knowledge: A Sociological Analysis* (London: Athlone Press, 1996), p.141.

⁵¹ N. David Mermin, 'The Science of Science: A Physicist Reads Barnes, Bloor and Henry', *Social Studies of Science* (Vol. 28, No.4, Aug 1998), p.622. The text referred to is Gauquelin, *Truth about Astrology*.

⁵² Mermin, 'The Science of Science', p.622.

⁵³ David Bloor, 'Changing Axes: Response to Mermin', *Social Studies of Science* (Vol.28, No.4, Aug 1998), p.626.

With this, Bloor effectively identified Mermin's position as being due to interpretive inertia. In response, Mermin quoted Barnes Bloor and Henry's comment in their book, that '[Gauquelin's work seems to imply] the existence of forces and interactions unrecognised by current scientific theory' and characterised this as their 'gloss on astrology'.⁵⁴ He remarked that this 'fails adequately to convey the truly spectacular degree to which compelling evidence in support of astrology would require a massive radical reconstruction of our current understanding of the world.'⁵⁵ Given this, Mermin argued that it was reasonable to reject Gauquelin's claims without attempting to replicate them, citing 'the gross inefficiency of investing extensive time and resources in an attempt to refute overwhelmingly improbable claims.'⁵⁶ Mermin's point here is the same as that of Kripke cited in chapter 3, which also arose in face of the Gauquelins' work – that in cases such as astrology, 'the dogmatic attitude is justified'.⁵⁷ The argument is that in practice, one has to work from assumptions about what is and is not *likely* to be true, so that any evidence that was at all supportive of astrology might be automatically disqualified from consideration.

I have dwelt on this point because of its implications for theories of truth. The correspondence theory's principle of straightforward correspondence between proposition and fact has proved difficult – practically, impossible – to implement as a complete definition of truth. In order to define what is and is not fact, the scientist Mermin and the philosopher Kripke invoked ideas about what is *likely* to be true, working from first principles. At that point, truth was no longer being defined purely in terms of correspondence between proposition and fact. The coherence of the Gauquelins' findings with physical science, taken as an established – and *complete* – body of knowledge was considered. Because the findings were not coherent with existing knowledge, they were judged not to qualify as factual.

⁵⁴ N. David Mermin, 'Abandoning Preconceptions: Reply to Bloor and Barnes', *Social Studies of Science* (Vol.28, No.4, Aug 1998), p.642. Words in brackets are omitted in Mermin's citation. The source for the passage quoted by Mermin is: Barnes, Bloor & Henry, *Scientific Knowledge*, p.141.

⁵⁵ Mermin, 'Abandoning Preconceptions', p.642.

⁵⁶ Mermin, 'Abandoning Preconceptions', p.642.

⁵⁷ Kripke, 'On Two Paradoxes', p. 49. In a footnote (n. 29) on this page Kripke added: 'What I had glanced at was a piece by Hans Eysenck professing to prove the theories of a particular French astrologer.'

Kripke's acknowledgement and advocacy of a 'dogmatic attitude' may begin to indicate why it has proved so difficult for the Gauquelin findings to receive due acknowledgement, and why they have often been dismissed on the basis of little or no serious evaluation. The consequence that begins to emerge is that the correspondence theory cannot be a *complete* basis upon which to evaluate truth, for even commentators who advocate a relentless examining of evidence fall short of that ideal. For example in an earlier publication, Mermin had taken the position that 'everything, no matter how evident or obvious, should be doubted, questioned, viewed with suspicion... unexamined truths are likely to be falsehoods'.⁵⁸ Yet in his discussion of the Gauquelin work he abandoned that philosophical position, proving unwilling to doubt or question his own certainty about the invalidity of any phenomena that might support astrology.

What has started to emerge here is a major objection to the correspondence theory, namely that what the term 'fact' points to can never be the pristine, unmediated and definitive entity that the correspondence theory would require it to be, if that theory were to be a *complete* account of truth. This point was articulated by Brand Blanshard (1892 – 1987): 'If truth does consist in correspondence, no test can be sufficient. For in order to know that experience corresponds to fact, we must be able to get at that fact, unadulterated with idea, and compare the two sides with each other.'⁵⁹ This is problematic because, 'When we try to lay hold of it [i.e. the fact whose correspondence would validate experience], what we find in our hands is a judgment which is obviously not itself the indubitable fact we are seeking, and which must be checked by some fact beyond it. To this process there is no end.'⁶⁰ The problem of defining 'fact' in an astrological context has only begun to emerge at this point. It is considered further in the next section.

⁵⁸ N. David Mermin, *Boojums all the Way Through: Communicating Science in a Prosaic Age* (Cambridge University Press, 1990) p. 32

⁵⁹ Brand Blanshard, *The Nature of Thought (Vol. 2)* (London: George Allen, 1939) p. 268.

⁶⁰ Blanshard, *Nature of Thought*, p. 268.

4.2.1.2 The Gauquelins' Work as Social Artifact

A new interpretation of the Gauquelins' findings was proposed by Geoffrey Dean in 2000.⁶¹ Dean's starting point was that the Gauquelin findings were significant – that is, they could not be explained by 'artifacts of astronomy, demography, bias, data selection or fraud'; and yet, 'it seems impossible to explain how planets (not all of them, just some of them) could have an effect on people (just eminent people, not the 99.994% who on Gauquelin's figures are not eminent).'⁶²

Dean suggested an interpretation whereby the Gauquelin findings would involve astrology only indirectly. In this account the findings should be attributed to social factors based on astrological belief, rather than to any actual relationship between life on Earth and astrology. He proposed 'three attribution artifacts': Self-attribution (for instance, people pursuing vocations that suited their horoscopes); Parental tampering (due to such phenomena as parents wanting to avoid recording the birth of a child on what would have been considered an unlucky day in 19th-20th century Europe); and prenatal control – the exercise of controlling measures by mothers and midwives to prevent birth at an unlucky date or time, or to achieve birth at an auspicious date or time.⁶³

Suitbert Ertel argued against Dean's case, concluding: 'The message is alleged with an appearance of historical competence while its substance is actually pure invention, fraught with contradictions and laced by lacunae of missing links.'⁶⁴ The disagreement between Ertel and Dean further illustrates Blanshard's critique of the role of 'fact' in correspondence theory: that it always requires interpretation. With interpretation, human subjectivity – generally supposed to be excluded in a realist understanding of correspondence theory – reappears, and with it, a plurality of incompatible perspectives

⁶¹ Geoffrey Dean, 'Attribution: a pervasive new artefact in the Gauquelin data' in *Astrology Under Scrutiny*, a special issue of the Dutch journal *Astrologie in Onderzoek* (Vol.13, Issues 1 & 2, October 2000) pp. 1 - 72.

⁶² Dean et al, *Tests of Astrology*, p. 91.

⁶³ Dean, 'Attribution: a pervasive new artefact', p. 1. The term Dean uses is 'perinatal' but since the focus is entirely on what happens before birth it seems Ertel's suggestion that 'prenatal' is the term that should be used is correct. (Suitbert Ertel, 'Gauquelin Planetary Effects – Brought Down to Earth? On Geoffrey Dean's Dealing with Stubborn Facts', *Correlation* Vol.23 (1), 2005, p. 28 n. 9).

⁶⁴ Suitbert Ertel, 'Gauquelin Planetary Effects', p.26.

on what is and is not factual. The problem can be exemplified by citing Ertel. I asked him about his involvement in the interview for *Astrology in the Year Zero*, where he had appeared as one member in a group of five critics of astrology, headed by Geoffrey Dean.⁶⁵ He said:

I ended up thinking that I had misjudged Geoffrey Dean's motivation and approach and that of my fellow interviewees. I began to wonder if the goal was to simply remove any empirical indication of possibly unexplainable correlations between planets and human affairs. Dean certainly appeared to act as though Gauquelin's correlations were obstacles to be got rid of. The ways in which he tried to remove them rested upon interpretations which stretched the limits of rationality and, above all, involved empirically most questionable interpretations, for example "parental tampering", fathers being deemed to report wrong birth times at the registration offices (Dean, 2000).⁶⁶

It did not appear that Geoffrey was able to accept any of my numerous objections based on empirical evidence which I published in six articles in *CORRELATION* (overview in Ertel, 2005). Any further debate with Dean and authors aligned with him appeared futile. For myself, I can only say that I should have liked to continue debating in a rational manner, but my "opponent" ceased replying to my questions and requests, as did the French and Dutch skeptics, when I pointed at "devils in their details". I simply wanted them to face facts.⁶⁷

The disagreement between Ertel and Dean illustrates the problem, introduced in the previous sub-section, with the idea of correspondence theory as a sole theory of truth, complete in itself: the definition of 'fact' inevitably involves interpretation and personal evaluation. The ongoing disputes about the validity, and significance, of the Gauquelin work illustrates this point.

4.2.2 Statistics and Uniqueness

The 'New York Suicide Study' was a research project conducted by astrologers under the aegis of the NCGR (National Council for Geocosmic Research) headed by the group's Research Chairman Nona Press, which commenced in 1974 and was described

⁶⁵ Phillipson, *Astrology in the Year Zero*, chapters 9 & 10 (pp. 124 – 166).

⁶⁶ Suitbert Ertel interview. The reference, 'Dean (2000)' – that is, Dean, 'Attribution: a pervasive new artefact' – was provided by Ertel.

⁶⁷ Suitbert Ertel interview. The reference to Ertel (2005) was provided by Ertel; the text is: Suitbert Ertel, 'Gauquelin planetary effects – brought down to earth? On Geoffrey Dean's dealing with stubborn facts', *Correlation* Vol. 23 (1), (2005), pp. 7 – 33.

in an article published in 1978.⁶⁸ The study was based on the data for 311 certified suicides in New York City between 1969 and 1973, this being the number for whom birth times were available, from a total population of 2,250.⁶⁹ The authors wrote: “Our overall hypothesis was that there would be some pattern discernible in the astrological charts of suicides that would be absent in those of a control group.”⁷⁰ An example of the type of correspondence for which they searched is Carter’s suggestion that affliction by Uranus gives a tendency to suicide.⁷¹ The search for such factors was very thorough; Dean et al estimated that their tests encompassed about 100,000 chart factors.⁷² At the end of their exhaustive tests, Press concluded: “we did not find any [astrological] factor that was a valid indicator of suicide.”⁷³

In our interview, Nona Press said that in the study ‘there were not statistically significant differences in positions or aspects between the suicides & controls, but when you took the whole story into account, those positions & aspects reflected that story.’⁷⁴ In other words, for any individual suicide, it was possible to see in the horoscope a description of the individual traits and events which eventuated in their killing themselves. But because each person's story was so different, and the relevant astrological factors so disparate, nothing registered in the overall statistical analysis. She continued: ‘For example, as I remember, a middle-aged man who lived with his mother drowned himself in the bathtub and slit his wrists. His chart showed that the sign Cancer, the Moon and Mars were very prominent in his chart, which fit with the circumstances of both his life and death.’⁷⁵

A similar position regarding statistics in astrology was put forward by the astrologer and biostatistician Kyle Pierce: ‘statistical significance and astrological satisfiability are two very different things. The clearest difference is that satisfying the astrological criteria, as

⁶⁸ Press, N., Michelsen, N.F., Russel, L., Shannon, J., Stark, M. ‘The New York Suicide Study’, *Journal of Geocosmic Research* Vol.2 No.2 (1978), pp.23-47. Reproduced, with addenda, in: Nona Press, *New Insights into Astrology* (San Diego: ACS Publications, 1993), pp.311-329. The quotations that follow in this chapter are from the latter text.

⁶⁹ Press et al, ‘New York Suicide Study’, p. 312.

⁷⁰ Press et al, ‘New York Suicide Study’, p.311.

⁷¹ Charles E. O. Carter, *An Encyclopedia of Psychological Astrology* (4th edn.) (London: Theosophical Publishing House, 1954 [1924]), p. 172; cited at Press p. 316.

⁷² Dean et al, *Tests of Astrology*, p. 208

⁷³ Press et al, ‘New York Suicide Study’, p.317.

⁷⁴ Nona Press, interview, 2005.

⁷⁵ Nona Press, interview, 2005.

exemplified in the question of radicality, cannot take place outside the context of the life situation that is under study.’⁷⁶ This theme can be elucidated through Mike Harding’s comments on the theoretical possibility of seeing the potential for murder in an individual’s horoscope:

I would be very surprised if it could be demonstrated, because I don’t think murder is a fact, in the sense that I don’t think it’s one category of something. I think someone who sits down and plans to kill their auntie to inherit a fortune is a totally different kind of person from someone who, in one moment of madness, lashes out and happens to connect with somebody’s head, kills them, and spends the rest of their life in the deepest remorse.⁷⁷

In the analysis of Press, Peirce and Harding, there is a problem in categorising unique instances of human behaviour as essentially ‘the same thing’, insofar as it fails to model the complexity of that behaviour. It may be the case that this complexity is sufficient to render tests of simple astrological combinations inadequate. The ‘fact’ to which an astrological ‘proposition’ would correspond might need to allow for greater variation and nuance than simple terms such as ‘suicide’ or ‘murder’.

Under a realist correspondence theory, the consequence of greater complexity in the facts under discussion is that it may be necessary to include more horoscopic factors in formulating the astrological propositions that would correspond to those facts. A corollary of this is that the poor results generally found in astrological research could be due to a lack of sophistication in the astrological model that is applied.

David Cochrane is an astrologer who sees it as essential that astrological analysis should include a high level of complexity. He specifically referred to complexity in the astrological aspects that are considered:

the mechanisms by which astrology operate are very complex, far more complex than astrologers seem to be willing to acknowledge. In my own astrological analysis, I use aspects up

⁷⁶ Kyle Pierce, interview, 2008. I confirmed with Kyle that Nona Press’s example illustrates the point he makes here.

⁷⁷ Mike Harding in: Phillipson, *Astrology Year Zero*, p. 114.

to the 180th harmonic, without which I feel like I am almost completely unable to see anything in the chart.⁷⁸

The term ‘harmonic’ is a way of describing the geometric relationships, known as ‘aspects’, between horoscopic factors. Thus for example if there is an aspect of 120° between two planets, that divides the chart’s circle by three and as such belongs to the ‘third harmonic’. Western astrology has typically considered aspects based on a division of the circle by two, three, four, six, eight and twelve.⁷⁹ The addition to this of all the harmonics up to 180 would add great complexity to the network of relationships between planets and other points in the horoscope. It seems plausible, under this understanding, that the complexity of analysis required would make it likely that a computer program would be capable of processing the information more accurately than a person.

In 1993, writing about research into astrology generally and the New York Suicide Study in particular, Nona Press wrote: ‘Maybe if we had a large enough computer to put in all the data, we could see the patterns [in astrology]’.⁸⁰ Twelve years later I asked for her perspective on this. She said:

Scientific/statistical research could potentially prove astrology in the future. The asteroids add more factors to the equations, but those added factors are specific principles, rather than the general ones of the planets. Maybe with ‘a large enough computer to put in all the data’, meaningful macros could be calculated to combine these various factors.

The complexity created by including asteroids in horoscopic work is considerable. Contemporary astrological software makes it possible to include over 38,000 asteroids in a chart, and there are estimated to be 796,640 bodies in the asteroid belt.⁸¹

⁷⁸ David Cochrane, interview, 2006.

⁷⁹ This is the case in e.g. Joanna Watters, *Astrology for Today* (London: Carroll & Brown, 2003) p. 70.

⁸⁰ Nona Press, *New Insights Into Astrology*, p.327.

⁸¹ The asteroid software referred to is the ‘38,000 Asteroids’ package from Cosmic Patterns Software: <http://www.astrosoftware.com/cpnew/software/asteroids/index.html> (accessed 23rd August 2019). Estimate of the total number of asteroids is from NASA: https://solarsystem.nasa.gov/asteroids-comets-and-meteors/asteroids/overview/?page=0&per_page=40&order=name+asc&search=&condition_1=101%3Aparent_id&condition_2=asteroid%3Abody_type%3Alike (accessed 23rd August 2019).

When I asked Cochrane if he thought a computer program would eventually be able to out-perform a human astrologer, he said, ‘For some specific situations that day has already come.’ He went on to describe a particular program his company has developed, which ‘uses a sophisticated analysis of harmonic and midpoint patterns that would take a person days to calculate without a computer.’ He continued: ‘I have witnessed people watch the Live Mini Reading of their own chart and feel stunned by the accuracy of the information.’⁸² For Cochrane, there is more to come from astrology as computer technology makes increasingly complex analysis possible. He said:

astrology has the ability to evolve into a system that can predict measurable results without the involvement of the practitioner. Astrology some day will, I believe, be able to predict human behaviour or perhaps weather, fluctuations in the stock market, or other measurable behaviour based on a formula rather than the intuition of a practitioner.⁸³

With this, Cochrane characterised astrology as being capable of having its truth-status proven within a realist, correspondence model – with the caveat that greater complexity of astrological analysis is needed.

4.2.3 More Complex Statistical Analysis

The need for a more complex and sophisticated form of astrological analysis is a perspective that *could* also have been adopted by Mark McDonough, a software designer and astrologer who conducted a major test to find out which horoscopic factors, from a set of 300,000, occurred (or were absent) with above chance frequency in the charts of alcoholics. As he put it, ‘the stuff that came back was *weird!* It was not what you would expect at all’.⁸⁴ In other words, although there were statistically significant correspondences between the presence, or absence, of certain horoscopic combinations and alcoholism, the factors involved were not at all those which astrology’s received wisdom suggested should be found. (An account of those factors was subsequently provided by Terri McCartney.⁸⁵)

⁸² David Cochrane, interview, 2006.

⁸³ David Cochrane, interview, 2006.

⁸⁴ Mark McDonough, interview, 2005.

⁸⁵ Terri McCartney, ‘Advancing the AstroSignature for Alcohol Abuse’: <http://www.astroresources.com/alcohol.html> (published 2004, accessed 23rd August 2019).

Rather than pursuing a revised version of astrology that would accommodate his findings, McDonough preferred to argue that it was the statistical approach rather than astrology that needed to be revised, arguing that ‘astrology is a non-linear phenomenon’. He explained this:

In algebra you might have an equation such as $3x + 2y + z =$ the final result. If some of those variables are non-linear, then they should be squared, or to the one half power. That would mean that some variables would interact more complexly than you might think. If you have a ton of oxygen and just a little bit of hydrogen, you’re not going to make a lot of water. There’s a proper ratio where, all of a sudden, bang! – you’ve got water.⁸⁶

After citing the relative youth of statistics as a field of study, and its potential to develop, McDonough concluded:

It’s my belief that, as we do genetic research, that the mathematics of pattern-recognition will be pushed to another level. And when those things become available in the public domain, and not just in someone’s laboratory, *then* we will have something that might be strong enough to resolve astrology.⁸⁷

McDonough said that he found this entire experience – both the failure of his research to support astrology, and the failure of astrologers to (as he sees it) properly address his findings – ‘very dispiriting’, adding, ‘the truth is, I never got over the fact that I got these weird results, and there was no way to explain it.’⁸⁸ He faced a dilemma faced by many astrologers – that of being convinced through experiences that astrology can provide truth, whilst being unable to demonstrate this within a realist correspondence model. Thus he said: ‘Do I think I disproved astrology? No. I have seen far too many amazing ‘coincidences’ in astrology to believe that it doesn’t work.’⁸⁹

4.2.4 The Problem of Methodological Diversity in Astrology

There is a structural issue in astrological technique that is severely problematic for any attempt to accommodate astrology within a realist correspondence theory. This is the

⁸⁶ Mark McDonough, interview, 2005.

⁸⁷ Mark McDonough, interview, 2005.

⁸⁸ Mark McDonough, interview, 2005.

⁸⁹ Mark McDonough, interview, 2005.

fact that different astrologers practise in different ways, using different understandings of horoscopic factors and different combinations of astrological techniques with which to judge charts. To illustrate: Cochrane and Press have been cited above advocating techniques (harmonic aspects, asteroids) that were developed in the second half of the twentieth century. For other contemporary astrologers such as John Frawley however, this is the wrong direction entirely and astrologers need to return to ‘the methods of the true astrological tradition... rather than their distorted modern counterparts.’⁹⁰ (By ‘astrological tradition’ he refers to the approach to western astrology that is largely epitomised in the writings of William Lilly (1602 – 1681)). For Frawley, harmonic aspects are ‘irrelevant’ and use of asteroids ‘has not provided the slightest increase in accuracy of astrological judgement’.⁹¹ Similarly, Ben Dykes contended that ‘there is too much flim-flam in modern psychological astrology. Modern astrologers have too often lost the old techniques of delineation and prediction, while heaping new planets, asteroids, and whatnot into a chart – which cannot then be reliably delineated.’⁹² In his view, ‘we would help ourselves more through the translation and teaching of traditional [astrology] texts, and a deeper learning of traditional [astrological] techniques.’⁹³

In the face of such disagreements amongst astrologers, Dean et al. observed that ‘astrologers disagree on nearly everything’ and suggested, ‘This again is why tests are needed – to sort out the mess.’⁹⁴ Some astrologers are in substantial agreement with this position – for instance Dennis Elwell remarked, ‘Given our pretensions, it is crazy that we cannot reach a consensus on what astrology says, rather than what this particular astrologer says.’⁹⁵ Cochrane argued that by using ‘more sophisticated interpretive techniques’ in astrological research, ‘We will reach a more consolidated view of how astrology works [...and], I believe, achieve statistical significance and replicability of research results, and this will form the basis of a body of literature and knowledge upon which virtually all astrologers agree.’⁹⁶ In explaining why this was necessary, he explained:

⁹⁰ John Frawley, *The Real Astrology* (London: Apprentice Books, 2000) p. 7.

⁹¹ Frawley, *Real Astrology*, p. 85, p. 63.

⁹² Ben Dykes, interview, 2006.

⁹³ Ben Dykes, interview, 2006.

⁹⁴ Dean et al, *Tests of Astrology*, p. 57.

⁹⁵ Elwell quoted in: Phillipson, *Astrology Year Zero*, p. 183.

⁹⁶ David Cochrane, interview, 2006.

In my opinion astrology as practiced today is a complex conglomeration of different things: intuition and ESP capabilities, rationalization, gullibility of clients, divination, and accurate and valid astrological techniques. The probability of the accurate and valid astrological techniques outweighing the other factors at work is, I think, extremely unlikely.

Although they did not use the term, in these passages Dean et al, Elwell, and Cochrane were discussing astrology in terms of its capacity to yield nomothetic truth: the emphasis was on a search for laws and principles within astrology which would equip it to be evaluated and understood as a type of science. In terms of the correspondence theory of truth, the quest was for astrological propositions that would reliably correspond to facts in the world.

The capacity of contemporary statistical science to evaluate such correspondences is also sometimes questioned. This has already been seen in comments by McDonough in the previous sub-section, 4.2.3. Whilst McDonough was hopeful that statistics would eventually develop so as to be able to track the significance in astrology, Pierce was less sanguine. Referring to the New York Suicide Study, and its failure to produce significant evidence, he said:

I think there is a basic problem in expecting that some quite predictable or consistent relationship will show itself when looking across many charts to correlate celestial motions with human behaviours. This kind of expectation forces one to assume that we live in a far more deterministic world than is in fact the case. In the final analysis that kind of world would seem like a much less interesting place to live. Given the complexity of the world, I'm not sure that we will ever be smart enough to turn astrological insights into reliable predictive formulas or models, or if this is possible.⁹⁷

There is thus an argument that statistical analysis of the kind that has been considered so far in this chapter is not currently, and perhaps cannot ever become, a suitable tool with which to evaluate the existence of correspondences between astrological propositions and facts. This would mean that tests of the kind considered thus far in this chapter exclude an essential element of astrology and therefore give a misleading impression of astrology's truth-status. In order to allow for reservations such as this, the scope of

⁹⁷ Kyle Pierce, interview, 2006.

astrological tests would need to broaden, and this could mean allowing the involvement of astrologers.

4.2.5 Tests of Astrology through the work of Astrologers

Numerous tests have been made of astrology which involve an astrologer, or astrologers, reading charts. This type of approach treats astrology as a black box for the purpose of the test – a system whose functioning is left mysterious, with attention paid only to the inputs and outputs.⁹⁸ Such an approach was described by Nicholas Rescher:

even altogether “unscientific” types of prediction (via tea leaves, palmistry, astrology, or other occult factors) can in principle be subjected to scientific quality control. Every sort of predictive resource can and should be tested: one can cogently assess its merits both as regards the questions at issue and as regards their answers. And only if it fares well in this regard does a predictive source deserve credence. And the crux is that we can manage to learn *that* the black box works without ever learning *how* it works.⁹⁹

Some instances of such tests are considered in the three following sub-sections.

4.2.5.1 Tests of Astrology through the work of Astrologers: Leo Knegt

A case which seemed as if it could promise vindication for astrologers is that of the Dutch astrologer Leo Knegt (1882 – 1957). Knegt agreed to be tested by a lawyer, Cornelis Petrus van Rossem (1892 – 1944), who published an account of the experiment in 1933.¹⁰⁰ Knegt had analysed the horoscopes of ten individuals who were not known to him, and whose birth data had been provided by Rossem. In an article which introduced this case to a modern audience, and particularly an English-speaking one, Rudolf Smit noted that Knegt’s chart readings were ‘both accurate and at times amazingly specific’, and suggested that ‘Knegt seems to have been an astrological white

⁹⁸ This sense of ‘black box’ derives from 20th century electronics and cybernetics, for instance: ‘the black box which represents an as yet unanalysed non-linear system’ – Norbert Wiener, *Cybernetics – or control and communication in the animal and the machine* (2nd edn.) (Cambridge, Mass: M.I.T. Press, 1961 [1948]) p. x.

⁹⁹ Nicholas Rescher, *Predicting the Future: An Introduction to the Theory of Forecasting* (State University of New York, 1998) p.106

¹⁰⁰ C. P. van Rossem, *Twee Occulte Problemen* (The Hague: W. P. van Stockum & Zoon, 1933).

crow, living proof of the impossible.’¹⁰¹ Smit’s ‘white crow’ refers to William James’s illustration of the principle that ‘a universal proposition can be made untrue by a particular instance’ – which James illustrated by the observation that a law whereby all crows are black would be disproved by a single white crow.¹⁰²

Knegt’s readings showed a level of correspondence to facts in the subjects’ lives which – if it were demonstrated more regularly by astrologers – might easily be judged to provide a basis for characterising the work of astrologers ‘true’ under the correspondence theory. For example, one subject was a woman who had only been able to find work as a stewardess on a passenger ship. Knegt’s reading stated: ‘Perhaps the best job for her is in the travel industry... she will succeed best in the hotel world or in some position on a passenger ship’.¹⁰³ The results for nine out of the ten test subjects also included remarkably specific and accurate factual information; the one subject for whom this was not the case, was also the one for whom no accurate time of birth had been available.¹⁰⁴ Astrologers would generally expect the lack of a birth time to make the interpretation of a chart less accurate, so that Knegt’s one poor result could be seen as consistent with the existence of correspondence between horoscope and biography.

Although Smit judged Knegt’s results sufficiently impressive to merit further research, he stopped short of characterising it as a ‘white crow’ for astrology. In particular he cited the fact of it being only a blind test, not double blind – meaning that Rossem was in a position to bias the overall result by (for instance) presenting positive correspondences and suppressing failures.¹⁰⁵ The involvement of human subjectivity had therefore not been entirely excluded, and – in effect following a realist version of the correspondence theory – Smit therefore judged that the case of Knegt would need to be replicated before it would count for anything.

¹⁰¹ Rudolf H. Smit, ‘Leo Knegt – A White Crow Beyond Our Wildest Dreams?’, *Correlation* Vol. 16 No. 1 (Northern Summer 1997), p. 3.

¹⁰² William James, ‘What Psychological Research Has Accomplished’ (Compiled from articles published in 1890, 1892 and 1896, and published in: William James, *The Will to Believe and Other Essays in Popular Philosophy* in: William James, Gerald E. Myers (ed.), *William James: Writings 1878 – 1899* (New York, NY: The Library of America, 1992 [1896]) pp. 680 – 700; quotation from p. 694.

¹⁰³ Cited in Smit, ‘Leo Knegt’, p. 8.

¹⁰⁴ Smit, ‘Leo Knegt’, p. 9.

¹⁰⁵ Smit, ‘Leo Knegt’, p. 6.

In an attempt to test and replicate Knegt's results, Smit invited astrologers to analyse five of the Rossem/Knegt charts and explain, for each, what astrological factors Knegt had seen that led him to the particular reading he delivered.¹⁰⁶ Further, Smit invited astrologers to match parts of Knegt's readings to the birth data upon which the reading was based.¹⁰⁷ Few astrologers took up the challenge, and the results were only slightly better than chance – 29 'hits' out of 105 possible, when chance would be 21.¹⁰⁸

There are two distinct perspectives in the writings of Dean et al on the question of how, and if, cases such as that of Knegt could establish the existence of correspondence between the work of astrologers and facts in the world. The first perspective is found in Smit's argument: 'Find an astrologer who can consistently get it right and the opponents [of astrology] would be forced to reconsider their views.'¹⁰⁹ It is also seen when, in 2000, Dean et al stated that 'hundreds of negative studies' of astrology 'would be instantly overturned if an astrologer could be found who delivered the goods under conditions where reasoning errors and other artifacts did not apply.'¹¹⁰ They went on to describe the test of Knegt as one that would qualify for this role if it could be replicated.¹¹¹

A different perspective was in evidence when, in 2008, I asked Dean et al about the Knegt case. They said: 'even if Knegt had produced his results under controlled conditions, it would not outweigh the many similar studies that have been negative, so it would establish only that there was something worth investigating. One swallow does not make a summer.'¹¹²

The modulation of avian metaphor – from white crow to solitary swallow – signals a variation in terms for the meaning of 'fact'. In the first ('white crow') account, if tests were to establish that an astrologer can produce significantly true information then that

¹⁰⁶ Smit, 'Leo Knegt', p. 11.

¹⁰⁷ Smit, 'Leo Knegt', p. 11.

¹⁰⁸ Rudolf H. Smit, 'Results of the Knegt Follow-up Test', *Correlation* Vol. 17 No. 2 (Northern Winter 1998/9) p. 73. Dean et al, *Tests of Astrology*, pp. 169 – 70, refers to a second test in 2006, which returned results worse than chance.

¹⁰⁹ Smit, 'Leo Knegt', p. 3.

¹¹⁰ Dean et al in Phillipson, *Astrology Year Zero*, pp. 153 – 4.

¹¹¹ Dean et al in Phillipson, *Astrology Year Zero*, pp. 154 – 5.

¹¹² Dean et al, interview, 2008.

information counts as factual, and the correspondence between the astrologer's work and these facts would suggest that something in astrology was true. The second ('one swallow') account denies that tests of astrologers could have so much significance. No matter how impressive the output of factual information might be, a point would never be reached at which this served as a basis for judging astrology to be (in part) true.

Attempting to get clear on this point, after mentioning the cases of Knecht and also Frawley's location of a missing shawl (discussed in the previous chapter), I asked Dean et al: 'what steps are involved in moving from specific readings where details are provided by an astrologer, to a general evaluation of astrology as "true" or "not true"?' They said:

To start with, one would need positive evidence under controlled conditions for a wide variety of specific astrological claims, which would then lead to studies in which researchers tried to find out what the effective factors were. Indeed, experimental psychologists solved this one a century ago, and their procedures are described in countless books on experimental psychology. Recall that the 'Argument from Personal Experience' is the most convincing to astrologers, and the least convincing to anyone knowledgeable about psychology.¹¹³

In this view, no matter how impressive the results produced by astrologers, astrology should not be judged true – unless it had also been possible to see how astrology worked at the level of simple combinations. Hence the conclusion of Dean et al: 'If people (not just astrologers) wish us to believe what they claim, there are accepted ways of doing it. Telling stories is not one of them. To put it another way, astrology (like anything else) is not proved by examples.'¹¹⁴

4.2.5.2 Tests of Astrology through the work of Astrologers: Vernon Clark and Shawn Carlson

The psychologist Vernon E. Clark (1911 – 1967) conducted three tests of astrologers which involved them in matching horoscopes to biographical facts.¹¹⁵ This pioneering

¹¹³ Dean et al, interview, 2008.

¹¹⁴ Dean et al, interview, 2008.

¹¹⁵ Vernon Clark, 'Experimental Astrology', *In Search* Vol. 2 No. 4, Winter 1960, pp. 44 – 69; *In Search* Vol. 3 Nos. 1 & 2, Spring/Summer 1960, pp. 25 – 33; *In Search* (Vol. not numbered) Winter/Spring

work resulted in Clark becoming synonymous with such tests, so that for example Smit described his test of Knecht's interpretations as 'the 43rd in a series of similar tests, usually known as Vernon Clark tests.'¹¹⁶ Probably the best-known tests of this type after Clark were conducted by the physicist and science writer Shawn Carlson.¹¹⁷ Carlson's work tested for correspondences between horoscopes and character profiles according to the California Personality Inventory.

The presentation and interpretation of the results from these studies has seen a pattern that will be familiar from the Gauquelin work: some glimpses of correspondence between astrology and fact, followed by wrangling about the interpretation of the findings and selective reporting. Thus for example Campion remarked that 'Carlson's conclusions are regularly cited in sceptical literature as conclusive that astrology does not work, but astrologers' rebuttals are never mentioned.'¹¹⁸

The initial results of Clark's own tests seemed positive for astrology; on the basis of them he contended that 'astrologers, using only the horoscope... can make better than chance identifications of individuals and at a high level of confidence.'¹¹⁹ On the other hand Carlson wrote that in the light of his tests, 'We are now in a position to argue a surprisingly strong case against natal astrology as practiced by reputable astrologers.'¹²⁰ Arguments have subsequently been made that challenge each position. Thus for example, Dean et al argued that Clark's results did not involve enough horoscopes to be significant, and that they should therefore be subsumed into a meta-analysis of all such tests, in which case the appearance of significance disappeared.¹²¹ Ertel evaluated Carlson's work and concluded: 'The design of Carlson's study was unfair.'¹²² Ertel even found a significant correlation in one of Carlson's tests which gave reason 'to take

1961, pp. 102 – 112. Reprinted as Vernon Clark, 'An investigation of the validity and reliability of the astrological technique', *Aquarian Agent*, Autumn 1970. The *In Search* texts are at: http://www.cosmocritic.com/pdfs/Clark_Vernon_Three_Articles.pdf (accessed 15th September 2019).

¹¹⁶ Smit, 'Knecht Follow-up Test', p. 74.

¹¹⁷ Shawn Carlson, 'A double-blind test of astrology', *Nature* Vol. 318, December 1985 pp. 419 – 425. Its influence is referred to by e.g. Ertel: '[Carlson's] study ranked first in subsequent discussions on astrological claims. Today his paper is referred to on more than 400 Internet pages... more than any other paper of its kind.' – Suitbert Ertel, 'Appraisal of Shawn Carlson's Tests', p. 125.

¹¹⁸ Campion, *Astrology and Popular Religion*, p. 108.

¹¹⁹ Vernon Clark, 'Experimental Astrology (Part 2)', p. 105.

¹²⁰ Carlson, 'Double-blind test of astrology', p. 425.

¹²¹ Dean et al in: Phillipson, *Astrology Year Zero*, pp. 146-7.

¹²² Ertel, 'Appraisal of Shawn Carlson's Tests', p. 134.

into account the probability that the astrologers were able, to some extent, to successfully match birth charts with CPI profiles.¹²³

There are two issues of philosophical import here. The first is that, as with the Gauquelin work, there is a need to interpret what shall and shall not count as ‘fact’, and this need for interpretation means that the correspondence theory cannot function here as a sole, sufficient, theory of truth.

The second issue is a recurrent suspicion that, despite the best efforts of those who designed these tests, the astrologers’ minds may have contaminated the purportedly sterile test environment. Thus although in 1977 Dean et al were sufficiently impressed by Vernon Clark’s tests to write that ‘the results appear to provide convincing support for astrology’, they continued: “In fact however this conclusion is not justified... the results could be due to intuition and not astrology.”¹²⁴ This judgement was based primarily on the case of Lee, who scored highly in one of Vernon Clark’s tests and whose approach seemed to involve more intuition than interpretation of astrological symbols.¹²⁵ Similarly, when Ertel commented upon Carlson’s tests, he suggested: ‘Correct astrological diagnoses, if they occur, might be due, e.g., to paranormal intuitions of psi-gifted astrologers.’¹²⁶ The definition, and possible relevance to astrology, of the terms ‘intuition’, ‘psi’ and related terms will be discussed in chapter 6 of this thesis.

By the time I interviewed Dean et al in 1999-2000, the shift in their evaluation of Vernon Clark-type work, remarked above, remained in place: “Vernon Clark’s results and those of most other matching tests have fatal problems due to their small sample sizes...”¹²⁷ Their central point was that whilst individual Vernon Clark-type tests produced results which appeared positive for astrology, when the results were put together in a meta-analysis, the appearance of significance disappeared and “the results

¹²³ Ertel, ‘Appraisal of Shawn Carlson’s Tests’, p. 131.

¹²⁴ Dean et al, *Recent Advances*, p. 554.

¹²⁵ Dean et al, *Recent Advances*, p. 20.

¹²⁶ Suitbert Ertel, ‘Appraisal of Shawn Carlson’s Tests’, p. 134. In support of this thesis, Ertel cited: Suitbert Ertel, ‘Astrologie und Psi. Fallstudie verstärkt die Zusammenhangshypothese’, *Zeitschrift für Anomalistik* Vol. 4 (1 – 3) (2004), pp. 52 – 101.

¹²⁷ Dean et al in Phillipson (2000), p.145.

are no better than chance”.¹²⁸ The correspondence between astrology and facts in the world, which appeared to be real, was therefore judged to be illusory. This in turn rests upon a model of how ‘facts’ should be defined, and – as with Knecht – it is a model which effectively discards positive findings on the basis that they are infrequent – adopting, therefore, the paradigm of the lone swallow rather than that of the white crow.

4.2.5.3 Tests of Astrology through the work of Astrologers: Terry Dwyer

The subject of this sub-section is not a test in a sense that would be recognised by a statistician. It is, however, a test of the type that astrologers frequently ask for. The assertion is often met with amongst astrologers that by practising astrology one comes to know from experience that peoples’ horoscopes correspond to their characters and the courses of their lives, even if this is difficult to prove to non-astrologers. For instance, the astrologer Nicholas DeVore (1886 – 1960) stated that ‘No one has ever been known to make a serious study of Astrology and then reject it’.¹²⁹ The astrologer Gerasime Patilas, in his valedictory editorial for the UK Astrological Association’s *Journal*, told his readers: ‘don’t worry about what sceptics may say, because we know better.’¹³⁰

It is problematic for this line of argument when an experienced astrologer renounces the subject, and therefore it is relevant to discuss the case of Terry Dwyer. Dwyer took up astrology in 1975, and retired early from a college teaching position in order to pursue it intensively. He estimated that, by the time he abandoned astrology in 1988, he had worked such long hours in his studies that he had probably accumulated about thirty years’ worth of normal learning experience.¹³¹ He gained the Mayo School’s Diploma in astrology, then became a tutor for the school for about five years. He taught at summer schools, conferences of the UK’s Astrological Association, wrote many articles for the *Astrological Journal* and *Harmonic Astrology Newsletter*, and a book, *How to Write an Astrological Synthesis*.¹³² He was also the Research Editor of the *Astrological*

¹²⁸ Dean et al in Phillipson (2000), p.146 where this point is explained and illustrated.

¹²⁹ DeVore, *Encyclopedia of Astrology*, p. viii.

¹³⁰ Gerasime Patilas, ‘Editorial’, *Astrological Journal*, Vol.50 No.5, Sept/Oct 2008 p. 4.

¹³¹ Terry Dwyer, ‘Stop Deluding Yourself’ in *Polarity* Vol. 1 No. 1 (August 1990) p. 2.

¹³² Articles include: Terry Dwyer, ‘What’s Your Bias? (Parts I and II)’, *Astrological Journal* Vol. XXVIII, No. 3 (April 1986), pp. 97 – 9, p. 129, p. 101 (the pagination of this edition having gone awry), and Vol. XXVIII, No. 4 (July 1986), pp. 153 – 158. Terry Dwyer, *How to Write an Astrological Synthesis: A Guide for Students* (Romford: L. N. Fowler & Co., 1985).

Journal for several years. He founded the Leicestershire Astrological Society, gave many talks there, and also provided one-to-one chart consultations for many clients. He also was a pioneer in the application of computer technology to astrology. His major work in this field was the creation of *Starword* – a program that generates fully synthesised natal chart interpretations – but he also wrote a number of programs for Astrocalc, the astrological software company which he co-founded with Colin Miles. His involvement with astrology, therefore, certainly met DeVore’s criteria of ‘a serious study of Astrology’.¹³³

In 1990, a new astrological magazine carried an article by him entitled ‘Stop Deluding Yourself’, with sub-headings including ‘How I gave up astrology’, ‘Astrologers do not like hard facts’ and ‘Why we won’t admit astrology has failed’. When I interviewed him, Dwyer stated that he began to doubt astrology because of a number of experiences in which astrology did not work – for instance, ‘forecasts for clients or for myself, which did not turn out right.’¹³⁴ Such cases included a client for whom ‘a marital break-up’ seemed certain, but which did not happen; and a couple he knew for whom the synastry (analysis of compatibility between horoscopes) suggested that he should find one congenial and the other not – when in fact the opposite was the case. Dwyer went on to comment on the problematic nature of astrological knowledge:

Why do astrologers believe that their work is valid? Is it that every time they give a reading they are proved right, either by an observable event, or by confirmation from a client? Of course not. Such confirmations are few and far between, but when they do happen they are seized on by the astrologer and remembered or quoted. What the astrologer does not remember or quote are the numerous statements which have not been confirmed. Astrologers’ biggest failing is *selective perception*. Believe what works and ignore what doesn’t.¹³⁵

Any thorough evaluation of astrology’s truth-status will need to accommodate and explain such experiences of astrology failing to work for an experienced astrologer.

¹³³ Nicholas DeVore, *Encyclopedia of Astrology*, p. viii (referring back to previous citation of this quotation).

¹³⁴ Terry Dwyer, interview, 2004.

¹³⁵ Terry Dwyer, interview, 2004 – original emphases.

4.2.6 Time-Twins as a Simple Solution

Another way of approaching the issue of correspondence is to look at time-twins. These are people who, whether siblings or not, were born sufficiently close in time and space that their horoscopes are virtually identical – in some cases, so close that an astrologer would not distinguish them as different in any way. This would seem to cut out many of the problems in testing astrology. By looking at time twins it is possible to evaluate the viability of correspondences between charts and the lives and characters of the subjects to whom they belong, without relying on any specific form of astrology. This is because in looking at time-twins one implicitly looks at two kinds of correspondence, the first of which does not involve astrology. The first type of correspondence is between the lives and characters of given pairs of time-twins. The second type of correspondence is between the horoscope that is shared by the time-twins, and their shared characteristics and life events. To the extent that the first type of correspondence does not exist, the possibility of astrology is rendered null – for so long, at least, as astrology is expected to deliver straightforward objective correspondences between horoscopes and individual lives.

This case was made by St Augustine (354 – 430 CE), who wrote that when he heard about the lives of a pair of exact time-twins it ‘marked the final end of all my doubts’ about astrology, and that henceforward he was convinced that any astrological readings which proved correct, did so only by ‘luck’ or ‘chance’, not by ‘skill’.¹³⁶ His evaluation of astrology’s truth followed the structure of the correspondence theory of truth: it happened that his high-born friend Firminus had been born at the same time as the son of a slave born in the household of a friend of Firminus’s family.¹³⁷ Augustine observed that their lives had subsequently been characterised by freedom and slavery respectively, so that if the interpretation of the horoscope they shared described one set of life-circumstances, it ipso facto did not describe the other.¹³⁸ The relationship of correspondence between horoscope and life-circumstance that would, in Augustine’s

¹³⁶ St Augustine, *Confessions*, trans. Pine-Coffin, R.S. (London: Penguin, 1961), p. 141, p. 142 (Book VII, Ch.6)

¹³⁷ Augustine, *Confessions*, p. 141 (Book VII, Ch. 6)

¹³⁸ Augustine, *Confessions*, pp. 141 – 2 (Book VII, Chs. 6 – 7).

view, need to exist in order for astrology to be true had thus been destroyed on the horns of a dilemma.

On this point Augustine developed an argument made by Pliny the Elder (23 – 79 CE), who had the advantage of access to census records: ‘every day, and in every part of the world, with respect to men that are born in the self-same hour; masters and slaves, kings and beggars, come into the world at the same moment.’¹³⁹ In similar vein, Sextus Empiricus (fl. 200 CE) observed that, of people born at the same time, ‘some... have been kings while others have grown old in chains. Thus, though many throughout the world were born at the same time as he, none was equal to Alexander of Macedon, nor to the philosopher Plato.’¹⁴⁰

The challenge posed to astrology by time-twins has also exercised astrologers, and formed the basis of an early attempt to reform astrology in the wake of the scientific revolution. In his almanacs for 1664 and 1665, John Gadbury asked his readers to send in the birth data and chief ‘accidents’ of children born on September 4 and 5, 1664, to assist him in his project to rebuild astrology along more scientific lines.¹⁴¹ Just over three centuries later, John Addey remarked: ‘If astrology is true then those born close together in time must have similar elements in their lives....’, and characterised the comparison of time-twins as an important way of evaluating ‘the truth or falsity of the astrological hypothesis’.¹⁴² He acknowledged that many factors in a horoscope would change in the course of a day, so that whilst people born on the same day might be expected to show some similarities, ‘one would expect to find *really exceptional* similarities of life and temperament only in those born almost exactly at the same time and in the same locality.’¹⁴³ Addey detailed a number of interesting cases of parallels in the lives of people with similar horoscopes, but concluded only that more research was needed.

¹³⁹ Pliny (the Elder); John Bostock, H. T. Riley (trs.), *The Natural History of Pliny Vol. II* (London: Henry G. Bohn, 1855) (Book VII, Chap. 49 (50), p. 206

¹⁴⁰ Sextus Empiricus, *Against the Professors*, trans. R. G. Bury (Cambridge, MA: Harvard University Press, 1949), 42 p. 361 (V 88-9).

¹⁴¹ Patrick Curry, *Prophecy and Power* (Cambridge: Polity Press, 1989) p. 75.

¹⁴² John M. Addey, ‘Astrological Twins’ in *The Astrological Journal* Vol. IX No. 1 (Winter 1966 – 67) p. 14.

¹⁴³ Addey, ‘Astrological Twins’, p. 14. Original emphasis.

Subsequent research has seen a pattern broadly similar to that seen in other astrological research already discussed in this chapter: a lack of vindication for astrology on the scale astrologers might have wished for and expected, and disagreement about whether there was or was not any evidence that would merit further investigation of astrology. Thus for example Peter Roberts (1928 – 2014) and Helen Greengrass concluded that their 1994 study was generally ‘disappointing’ so far as astrology was concerned, but that it offered some evidence that could support a ‘new astrology’.¹⁴⁴ A series of exchanges ensued with Christopher French, Antony Leadbetter and Geoffrey Dean, which concluded with that group’s assertion: ‘we agree with Roberts that his data contain measurable effects, but we disagree that astrology is needed to explain them.’¹⁴⁵ When, in 2000, I asked Peter Roberts for his perspective on his research and criticisms of it, he stated that:

we found a small but important group of ‘close resemblers’ – and those occurred more frequently among pairs born close together than for those born far apart. French et al have tried to discredit this finding by arguing that an inappropriate statistical test was applied. However, it emerges that they want to test a different model and therefore propose a different test procedure.¹⁴⁶

In short, here – as with the Gauquelin work – there is disagreement between experts in the field about how the data from studies should be interpreted. Much the same can be said of a study of time-twins conducted by Suzel Fuzeau-Braesch, who was sufficiently convinced of an astrological effect in her statistical analysis to claim that ‘a new scientific fact has emerged’.¹⁴⁷ This proved contentious.¹⁴⁸ There is therefore a grey

¹⁴⁴ Peter Roberts & Helen Greengrass, *The Astrology of Time Twins* (Bishop Auckland, Durham: Pentland Press, 1994) p.67, p. 78.

¹⁴⁵ Christopher C. French, Antony Leadbetter & Geoffrey Dean, ‘Reply to Roberts’, *Journal of Scientific Exploration* Vol.11 No.2 (1997) p.159. Previous entries in this sequence were: Christopher C French, Antony Leadbetter & Geoffrey Dean, ‘The Astrology of Time Twins: A Re-Analysis’, *Journal of Scientific Exploration* Vol.11 No.2 pp.147-55; Peter Roberts, ‘Commentary on French et al’, *Journal of Scientific Exploration* Vol.11 No.2 pp.157-61.

¹⁴⁶ Phillipson, *Astrology Year Zero*, p.242.

¹⁴⁷ Suzel Fuzeau-Braesch, ‘An Empirical Study of An Astrological Hypothesis in a Twin Population’, *Personality and Individual Differences*, Vol.13, 1992, p.1141.

¹⁴⁸ A critique came from: Suitbert Ertel and Geoffrey Dean, ‘Are Personality Differences Between Twins Predicted by Astrology?’, *Personality and Individual Differences*, Vol.21 No.3, 1996, pp.449-454. Fuzeau-Braesch’s response is: Suzel Fuzeau-Braesch, ‘Comments on “Are Personality Differences Between Twins Predicted by Astrology”’, S.Ertel and G. Dean’, *Personality and Individual Differences*, Vol.21 No.3, 1996, pp.455-457.

area where the existence of similarities is a subject of debate. As with the Gauquelin work, though, the possible existence of *some* significance should not obscure the lack of major similarities between time-twins that would support astrology as it is practised.

4.2.7 Conditionality and Time Twins

The astrologer Bernard Eccles has twin daughters who were born so close together in time that they share the same ascendant degree.¹⁴⁹ He told me that they have considerably different characters, and that the explanation which works best in his experience is to say that the first-born takes the horoscope for the moment of birth, whilst the second-born takes that chart after it has been ‘turned’, so that the cusp of the third house (the house of siblings) becomes the ascendant. The younger twin, therefore, has a chart which is changed and defined by the fact of being a sibling.

A similar idea, albeit with wider scope for differentiation between siblings’ charts, was proposed by Frank Clifford: ‘My feeling about twins, having looked at them for years, is that they tend to polarise the chart – they tend to hold onto different corners of the chart... that’s my experience.’¹⁵⁰ To illustrate the idea of holding onto ‘different corners’ of the chart, Clifford gave the example that one twin, wishing to distinguish themselves from their sibling, might choose to do this by identifying more with the Moon in their horoscope than with the Sun.

The idea, then, is that an individual’s horoscope would not define their life and character in an absolute way, but that it would be one factor amongst several, and that the way in which the chart manifested would be conditioned by these other factors. One example of such ‘other factors’ would be that someone who is born as a younger twin may have their chart significantly affected by that fact. That would not explain the difference in character between time-twins born to different families, and in fact Clifford remarked that time-twins from different families sometimes resemble one another more closely than time-twin siblings because of the absence of a drive to differentiate oneself from a sibling.

¹⁴⁹ Personal communication from Bernard Eccles 29th January 2009, cited with permission.

¹⁵⁰ Frank Clifford, interview, 2005.

The idea that any given individual would need to be characterised by factors other than the horoscope is found in Ptolemy's *Tetrabiblos*:

if the seed is generically the same, human for example, and the condition of the ambient the same, those who are born differ much, both in body and soul, with the difference of countries. In addition to this... rearing and customs contribute to influence the particular way in which a life is lived. Unless each of these things is examined together with the causes that are derived from the ambient... they can cause much difficulty for those who believe that in such cases everything can be understood, even things not wholly within its jurisdiction, from the motion of the heavenly bodies alone.¹⁵¹

There is thus precedent, in the astrological tradition represented by Ptolemy, for the principle that two horoscopes which are practically identical may yet manifest differently. For Ptolemy it is the 'ambient' – which in this context signifies the configuration of planets and stars – that has 'the greatest influence'.¹⁵² The principle remains, however, that the significance of a horoscope would not be entirely self-contained, but would be conditioned by non-horoscopic factors. This is also a common view amongst contemporary astrologers. In his survey of astrologers' attitudes, Campion found that the statement 'Astrology should take other factors, e.g. environment and heredity, into account' was agreed to by 61%, 75% and 71.7% of respondents at three astrology conferences.¹⁵³

As was seen above, Augustine complained that astrology did not show the respective social stations of a pair of time-twins. But in Ptolemy's account, the 'rearing' of the individuals should be included as something that would condition the way in which the horoscope would manifest. So that rather than complaining that the time twins' shared horoscope did not show the fact of one being the child of slaves and one from a wealthy

¹⁵¹ Ptolemy, *Tetrabiblos*, pp. 17 – 19 (I. 2). ; pp. 17 - 19. Discussed as a significant consideration for astrology by e.g. Campion, *The Dawn of Astrology*, p.213.

¹⁵² Ptolemy, *Tetrabiblos*, p. 19 (I. 2). For the significance of 'ambient' here: H. Darrel Rutkin, 'The Use and Abuse of Ptolemy's *Tetrabiblos* in Renaissance and Early Modern Europe: Two Case Studies (Giovanni Pico della Mirandola and Filippo Fantoni) in Alexander Jones (ed.), *Ptolemy in Perspective: Use and Criticism of his Work from Antiquity to the Nineteenth Century* (Dordrecht: Springer, 2010) p. 139.

¹⁵³ Campion, *Astrology and Popular Religion*, p. 181 Table 12.7 (vii). The conferences were in, respectively: 1999 (USA), 1999 (UK), 2001 (USA).

family, in this view Augustine should have applied these disparate conditions to establish a context within which to read the chart.

This establishing of context is something that an astrologer might do in the first few minutes of meeting a client. Thus for example the astrologer Noel Tyl (1936 –2019) suggested that, at first meeting, the astrologer should be aware of elements in their client's behaviour such as:

Punctuality, lateness; speech patterns and word choice, i.e. educational background; direct or indirect gaze; smiles; graciousness with compliments or the lack of them; color choice in clothing; neatness or sloppiness; is the client a nail biter, a foot-wiggler; did the woman wash her hair that morning? Did the man have his shoes shined? What about jewelry accents?¹⁵⁴

Tyl gives these as examples of a process in which the astrologer observes 'what within the client's astrology is becoming obvious as client and astrologer come together?'¹⁵⁵

In order to fit within the realist paradigm, tests of astrology are typically designed to exclude that type of interaction. Typically, the only factor that an astrologer under test conditions will be told is the gender of a subject – hence for instance in the test of Knegt, the information with which Van Rossem supplied him for each subject was the birth data, and whether the subject was male or female.¹⁵⁶

There could be latitude here for increasing the amount of information that would be given to astrologers about test subjects. This could take place within a realist correspondence framework – the extent of the additional information, and its impact on the astrologers' readings, would then be a technical issue for test design, not a philosophical one. The other possibility, which does invoke a philosophical distinction, is that it could be a mistake to attempt to exclude mind from evaluations of astrology – that the realist paradigm in some way distorts the functioning of astrology.

¹⁵⁴ Noel Tyl, *Noel Tyl's Guide to Astrological Consultation* (Woodbury MN: Llewellyn, 2007) p. 61.

¹⁵⁵ Tyl, *Noel Tyl's Guide*, pp. 60 – 1.

¹⁵⁶ Smit, 'Leo Knegt', p. 7.

4.3 Non-Realist Correspondence

Although, as stated in this chapter's introduction, the correspondence theory of truth is usually based on a realist ontology, this is not necessarily the case. Thus for example Lynch remarked that facts could be defined as partially or even wholly mind-dependent, in which case, 'propositions would still be made true by, e.g., the obtaining of a certain set of affairs; that this state of affairs is mind-dependent is irrelevant.'¹⁵⁷ The same point was made by Kirkham:

Historically, most correspondence theories, like Russell's and Austin's, have been Realist theories; but...correspondence theories are not intrinsically Realist... It is perfectly possible to hold that truth consists in correspondence with facts and to hold also that facts are mind-dependent entities.¹⁵⁸

There have not been many philosophers who have advocated a non-realist version of the correspondence theory. One who did was J. M. E. McTaggart (1866 – 1925) for whom 'truth... is a relation of correspondence to a Fact' whilst at the same time, 'nothing is true but mental states'.¹⁵⁹ The contemporary philosopher Rögvaldur Ingthorsson has summarised McTaggart's position: 'truth becomes only one more relation between the substances existing in Absolute Reality. This... is perfectly in line with his idealism, according to which everything is spirit.'¹⁶⁰ A non-realist ontology does not however need to go as far as McTaggart in the direction of idealism; if mind plays a significant role in the constitution of facts, then by definition a realist approach to correspondence will not suffice. Applied to astrology, this would mean that Dean et al's requirement to eliminate astrologers' subjective input to chart reading would exclude something essential to the proper evaluation of astrology's truth.

¹⁵⁷ Michael P. Lynch, 'Realism and the Correspondence Theory: Introduction' in: Michael P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives* (Cambridge, Mass: MIT Press, 2001) p. 12.

¹⁵⁸ Kirkham, *Theories of Truth*, p.133 – 4.

¹⁵⁹ J. M. E. McTaggart, *The Nature of Existence* (Vol. 1) (Cambridge University Press, 1921), p. 11, p. 16.

¹⁶⁰ R. D. Ingthorsson, *McTaggart's Paradox* (New York: Routledge, 2016) p. 28.

4.3.1 Meaning as Characteristic of Divination

The fundamental divide reappears here, between the views of astrology as science and as divination. This appears clearly in a critique by Cornelius of the tests made by Clark and Carlson. Cornelius observed that the tests were designed to allow ‘zero contact between astrologer and test client.’¹⁶¹ He elaborated the difference thus created between what usually happens when astrologers do astrology, and what happens in tests of astrology: ‘In life, astrology and clients emerge within a definite context of meaningfulness for both parties [i.e. both astrologer and client]. The interpretation will ‘matter’ for both. In the test, the only context is the experiment... It is not clear *for whom* the interpretation *matters*.’¹⁶² Elaborating the implications of this approach as regards significance, or meaningfulness, Cornelius observed:

Since an omen is only an omen if it is recognised as such, it is clear that its significance is dependent on the participation of those for whom it is present. Its validity does not depend in any way on some general or theoretical law governing the production of omens. Its power comes precisely from its unique appearance ‘for us, here, now’.¹⁶³

Tests of astrology have typically searched for phenomena that are replicable and (therefore) objective. Meaning has often been characterised as a purely subjective phenomenon and as such, has been segregated from truth – as when, for instance, Dean et al suggest that the evidence from tests of astrology ‘deny that astrology is a source of factual truth, which is not to say it cannot be meaningful.’¹⁶⁴ In the view of astrology as divination, however, this approach excludes the essence of astrology from tests of astrology. This case was made by Curry:

insofar as astrology is divination, it cannot be treated as if it was putatively, potentially or actually science... it cannot survive being treated as... algorithmic, (sic) universal or strictly propositional knowledge... In other words, if it is a firm desideratum to take astrology seriously as such, those approaches, which are guaranteed to destroy it (within their ambit), must be rejected.¹⁶⁵

¹⁶¹ Cornelius, *Moment of Astrology*, p. 342.

¹⁶² Cornelius, *Moment of Astrology*, p. 342.

¹⁶³ Cornelius, *Moment of Astrology*, p. 133.

¹⁶⁴ Dean et al, *Tests of Astrology*, p. 3.

¹⁶⁵ Curry in: Willis and Curry, *Astrology Science Culture*, p. 114.

Cornelius has suggested that the significance of tests of astrology might not relate to their ostensive content (namely the evaluation of astrology in some way). Rather, the significance of such tests would be conditioned by and relate to ‘the attitudes and desires of the participants.’¹⁶⁶ If astrology is really ‘a phenomenon of experience rather than the experience of an objective phenomenon’ it is difficult to see how this conclusion could be avoided.¹⁶⁷ Subjective experience would be the primary, or sole, repository of the ‘facts’ to which astrological propositions would correspond.

The distinction proposed here can be found in the writings of Augustine. As has been seen, he criticised astrology in the light of the differences between time-twins, pointing out that the same horoscope did not correspond to the same destiny. He then wrote:

O Lord, though neither the astrologers nor those who consult them know it, by your secret prompting each man, when he seeks their advice, hears what it is right for him to hear. For... you know what is right for him, because you can see the hidden merits of our souls.¹⁶⁸

Augustine therefore introduced a literal *Deus ex machina*, framing astrology as a way of engaging with the divine. Although the person consulting an astrologer might not realise it, therefore, God was conveying ‘what it is right for him to hear’ through the medium of the astrologer and astrology. In the terms used in this thesis, Augustine attacked the idea that astrology could deliver nomothetic truth, characterising it rather as a source of idiographic truth; astrology-as-divination, therefore, not astrology-as-science. And indeed Cornelius has suggested that there is ‘a great perception in [Augustine’s] particular line of criticism of astrology’ on this point.¹⁶⁹ A partial parallel to Augustine’s position can also be seen in the comments of Dean et al, and Ertel, all of whom – as was seen in section 4.2.5.2 above – mooted intuition or psi as explanations for astrology seeming to work in the Vernon Clark and Carlson tests. The parallel is that the existence of some truth is acknowledged, albeit not a kind of truth that would be capable of being repeated and intersubjectively tested.

¹⁶⁶ Cornelius, *Moment of Astrology*, p. 78.

¹⁶⁷ Cornelius, *Astrology and Divination*, p. 1. Original emphases.

¹⁶⁸ Augustine, *Confessions*, p. 142 (Book VII, Ch. 6).

¹⁶⁹ Cornelius quoted in: Phillipson, *Astrology Year Zero*, p. 183.

Augustine eventually abandoned the idea that the agent behind astrological truth was God, and in a work completed twenty-five years after the *Confessions* he identified a different agency: ‘when astrologers give replies that are often surprisingly true, they are inspired, in some mysterious way, by spirits, but spirits of evil...’.¹⁷⁰ The replacement of ‘God’ with ‘spirits of evil’ raises complex issues. On one hand, for Augustine there was truth in what astrologers said in either case. On the other hand, the intention of the spirits was ‘to instil and confirm in men’s minds those false and baleful notions about “astral destiny”.’¹⁷¹ For Augustine, therefore, the road to hell could be paved with propositions that corresponded to facts. There is an issue here for the correspondence theory of truth that is not limited to a religious context, namely that a binary, yes-or-no focus on whether propositions correspond to facts neglects the context of meaning in which those facts necessarily exist, and can therefore be incomplete.

4.3.2 Meaning and Correspondence Theory

Brand Blanshard saw ‘meaning’ as a problem for the correspondence theory of truth. He wrote that where meaning and truth are concerned, ‘one entails the other... truth is the adjective of meaning and follows it like a shadow.’¹⁷² Developing the relevance of this to the idea of facts and the correspondence theory, he suggested that what we take as fact is always conditioned by our present context.¹⁷³ He illustrated this with the analogy of a proposition which might be considered to correspond to a fact - ‘Napoleon lost Waterloo’.¹⁷⁴ For a schoolboy, he continued, the meaning of this might be that ‘a plucky little fighter in a cocked hat and riding a big white horse had to gallop off at top speed to get away from pursuing red-coats.’¹⁷⁵ Yet as that child grew older and studied the subject in more detail, the same proposition – ‘Napoleon lost Waterloo’ – would now stand for ‘a complicated set of military evolutions... [and] the dominance of

¹⁷⁰ St. Augustine in: St. Augustine, Henry Bettenson (tr.), *Concerning the City of God against the Pagans* (London: Penguin, 1984 [1972]), p. 188 (Book 5, Ch. 7). The *Confessions* were finished in 401 CE, *City of God* in 426 CE according to: Miles Hollingworth, *Saint Augustine of Hippo: An Intellectual Biography* (London: Bloomsbury, 2013) p. xviii.

¹⁷¹ St. Augustine, *City of God*, p. 188 (Book 5, Ch.7).

¹⁷² Blanshard, *Nature of Thought* (Vol.2), p. 309.

¹⁷³ Blanshard, *Nature of Thought* (Vol.2), p. 308.

¹⁷⁴ Blanshard, *Nature of Thought* (Vol.2), p. 308.

¹⁷⁵ Blanshard, *Nature of Thought* (Vol.2), p. 308.

Europe by new political and national ideals.’¹⁷⁶ Blanshard therefore criticised the view in which a ‘fact’ to which a proposition would correspond must have an absolutely fixed significance, dissociated from its meaning for particular individuals at particular times.

The relevance of this to astrology began to emerge in the discussion of Augustine in the previous section: if a person consistently hears true statements from astrologers, but those statements come from evil spirits and the net result is to instil a pernicious view in that person and lead them away from God, then the simple correspondence between propositions and facts is not a full depiction of that situation. A more positive and contemporary illustration can be found in an astrological consultation undertaken by Mike Harding for a man in his forties who had devoted his life to the family business, and whose demeanour, according to Harding, was very serious and career-oriented.¹⁷⁷ Seeing that the client’s Moon was in Gemini – which, in line with the usual astrological understanding, he associated with ‘a light-hearted side’, Harding chose to focus on the existence of this side to the client’s personality, which he judged the client to feel should not be there.¹⁷⁸ Harding concluded:

After the session, I suppose a few weeks later, he rang me and said that he had thought a lot about our meeting. He realised that this [Gemini] was a side of himself, it wasn’t something he should try and educate himself out. There was a playful, enjoyable, light-hearted side to him, and he made enormous changes in his life. He said that he felt really happy for the first time, and couldn’t praise astrology highly enough.¹⁷⁹

There is a parallel here with Blanshard’s observations on the battle of Waterloo: For many people, being told that they had a light-hearted side to their nature might strike them as true, but trivial. If it was encountered in an astrological test the proposition would often be ruled out since it could be explained as an instance of the Barnum Effect, whereby ‘people tend to be inordinately impressed with the accuracy of... vague

¹⁷⁶ Blanshard, *Nature of Thought* (Vol.2), p. 309.

¹⁷⁷ Harding expressed this using astrological terminology: ‘it was as if he had ten planets in Capricorn in the tenth house.’ – Harding quoted in Phillipson, *Astrology Year Zero*, p. 64.

¹⁷⁸ Harding in: Phillipson, *Astrology Year Zero*, p. 65.

¹⁷⁹ Harding in: Phillipson, *Astrology Year Zero*, p. 65.

statements'.¹⁸⁰ For Harding's client, however, the information had deep meaning with ramifications in many areas of his life. It is quite conceivable that after the experience, he would have held the belief 'astrology is true' because of the way in which an astrological proposition (the interpretation of Moon in Gemini) corresponded to a meaningful fact about his character. The idea of 'meaning' points towards the broad human context within which individual facts exist. The suggestion is that to focus on facts without allowing for meaning is to neglect a significant part of the picture. The coherence and pragmatic theories of truth are more concerned with meaning, and this issue will therefore be explored in chapters 5 to 7.

4.4 Conclusion

The correspondence theory of truth, underpinned by a realist ontology, is the epistemological basis on which astrology's truth-status is often evaluated by critics of astrology. Some astrologers also accept it as an adequate basis on which to evaluate astrology's truth-status.

The results of tests conducted under this framework, taken overall, show very little evidence of correspondence between astrological propositions and facts. Several hypotheses are available to account for this, including a need for greater complexity in astrological analysis, a need to return to traditional astrological methodology, and a need for greater complexity in statistical analysis. In each case there is not a philosophical problem, only a technical one of improving astrological or statistical techniques. Another possible conclusion is that sufficient astrological propositions have been tested and found not to correspond to facts, that astrology per se can be judged to be not true. This position however rests upon assumptions such as: how the term 'fact' should be defined; and whether astrology should necessarily be credited as the source of astrological propositions (rather than e.g. intuition, psi, or God).

Hence an application of the correspondence theory to astrology has vindicated Horwich when he stated, 'if it is to provide a rigorous, substantial, and complete theory of

¹⁸⁰ Peter Glick, Deborah Gottesman, 'The Fault is Not in the Stars: Susceptibility of Skeptics and Believers in Astrology to the Barnum Effect', *Personality and Social Psychology Bulletin*, Vol. 15 No. 4, 1989, p. 573.

truth... then [correspondence theory] must be supplemented with accounts of what facts are, and what it is for a belief to correspond to a fact.’¹⁸¹ Applying the correspondence theory of truth to astrology has raised a host of salient issues and brought the discussion into focus as regards the need for enquiry into the underlying frame of reference that should be applied. The two contenders for this role, astrology-as-science and astrology-as-divination, will be evaluated – respectively – in chapters five and six, which follow directly. This evaluation will be pursued in the context of the coherence theory of truth throughout both chapters. In this way the coherence theory will bring perspective to the definition of astrology’s truth-status, whilst at the same time, the practical issues raised by the discussion of astrology will illuminate the coherence theory of truth.

¹⁸¹ Horwich, ‘Theories of Truth’, p. 773.

Chapter 5: Coherence Theory Part 1 – Coherence with Science

5.1 Introduction

This chapter and the next will discuss the coherence theory of truth and its application to astrology, with section 5.2 below introducing and defining the coherence theory. The present chapter will focus on science as the system with which astrology's coherence would be evaluated, whilst chapter 6 will consider divination as an alternative for this role. In order to develop and analyse a full account of what it would mean for astrology to cohere with science, a fivefold definition of science will be set out in section 5.3. The definition of science in this context necessarily implicates the 'new science' – specifically, quantum and chaos theories. The reasons for this, and the relevance of the new science, will be discussed in section 5.4.

5.2 Definition of the Coherence Theory

The coherence theory of truth characterises truth in terms of the extent to which a proposition (or belief, judgement etc) coheres with other propositions. Typical definitions from recent texts are that 'a statement is true if it "coheres" or "fits in" with other statements thereby forming a complete system'; and that the coherence theory is 'the view that either the nature of truth or the sole criterion for determining truth is constituted by a relation of coherence between the belief (or judgment) being assessed and other beliefs (or judgments).'¹

The proposal of a discrete theory of truth by the name of the coherence theory did not occur until 1906, as discussed in chapter 3.² It is however possible to discern the central idea in Sextus Empiricus's observation, made around 200 CE, that a fever is detected and defined by a 'cluster' of symptoms 'such as a high temperature as well as [rapid] pulse and soreness to the touch and flushing and thirst and similar things'³ He used this

¹ Harrison-Barbet, *Mastering Philosophy*, p.149; Bonjour, Laurence, 'Coherence Theory of Truth' in: Robert Audi (ed.), *The Cambridge Dictionary of Philosophy* (2nd edn.) (Cambridge: Cambridge University Press, 1999 [1995]), p.153.

² In Harold H. Joachim, *The Nature of Truth*.

³ Sextus Empiricus, Richard Bett (tr., ed.), *Against the Logicians* (Cambridge University Press, 2005) p. 37 [Book 1, 179]. The clarifying addition of [rapid] is by Bett.

example to illustrate his assertion that ‘an appearance is never monadic – rather, one hangs on another, like a chain’.⁴ As the translator of this passage emphasised, ‘the coherence of multiple appearances is the point at issue.’⁵

This principle of coherence, whereby several factors combine to demarcate truth, has been illustrated by several modern philosophers through the analogy of building a case in a court of law. For example, in a discussion of coherence, Robert C. Pinto stated that ‘the force of each individual item [of testimony and physical evidence] lies in the contribution it makes to an overall story, a story that can be told only if all or most of the items are taken together and taken to be interconnected in the way the prosecutor wants us to see them interconnected.’⁶

The primary criticism of the coherence theory is the ‘isolation objection’, defined as follows by Pojman: ‘the coherence of a theory is an inadequate justification of the theory, because by itself it doesn’t supply the necessary criteria to distinguish it from illusory but consistent theories.’⁷ This is the criticism that Bertrand Russell levelled at the coherence theory: ‘it seems not uncommon for two rival hypotheses to be both able to account for all the facts.’⁸ On this basis, Russell concluded that ‘coherence as the definition of truth fails because there is no proof that there can be only one coherent system.’⁹ Russell’s example of a coherent, but untrue, system was a dream; amplifying the same point, Abel remarked that ‘Astrology constitutes a coherent system... so do Grimm’s fairy tales; and so do the delusions of the psychotic; but we do not take them to be true.’¹⁰ Similarly, Pojman chose dreams, hallucinations and astrology as examples of systems which may be coherent but not therefore true.¹¹

⁴ Sextus Empiricus, *Against the Logicians*, p. 37 [Book 1, 176].

⁵ Richard Bett in Sextus Empiricus, *Against the Logicians*, p. 37 n. 77.

⁶ Robert C. Pinto, *Argument, Inference and Dialectic: Collected Papers on Informal Logic* (Dordrecht: Kluwer, 2001) p. 64.

⁷ Louis P. Pojman, ‘Theories of Justification (I): Foundationalism and Coherentism’ in Louis P. Pojman (ed.), *The Theory of Knowledge: Classic and Contemporary Readings* (2nd edn.) (Belmont, CA: Wadsworth, 1993) p. 190. More advocates of the isolation objection are detailed in: Paul Moser, ‘Lehrer’s Coherentism and the Isolation Objection’ in John W. Bender (ed.), *The Current State of the Coherence Theory: Critical Essays on the Epistemic Theories of Keith Lehrer and Laurence Bonjour, with replies* (Dordrecht: Kluwer, 1989), particularly pp. 31 – 6.

⁸ Russell, *Problems of Philosophy*, p.71.

⁹ Russell, *Problems of Philosophy*, p.71. Examples of this position in recent texts are detailed at: Harrison-Barbet, *Mastering Philosophy*, p.149.

¹⁰ Abel, *Man is the Measure*, p. 75.

¹¹ Pojman, ‘Theories of Justification’, p. 190.

A case can be made that this objection is not fatal to the coherence theory, and that hope can be found by taking in a broad range of statements (or beliefs, judgements etc.). This can be illustrated by returning to the analogy of a trial in court. In his discussion of coherence theory, Robert Kirk observed:

In a criminal trial, one side often argues that the other side's case does not hang together: it involves improbabilities or even inconsistencies. For example, it requires the accused to have been in two different places at the same time. If the defence manages to persuade the jury that the prosecution's case is incoherent, or contains too much that is improbable, or implies actual contradictions, the jury is likely to acquit.¹²

The parallel suggested by Kirk is that in a court of law, *and* in the application of the coherence theory, what is at stake is not only the consistency of statements with one another, but also the consistency of those statements with a broader, and generally accepted, frame of reference. Hence, in Kirk's example, it is generally accepted that a person could not be in two places at the same time. Applied to coherence theory, the argument is that the isolation objection can be addressed by allowing 'coherence' a wide frame of reference that is able – so to speak – to tether a specific proposition or set of propositions to reality. Paul Thagard has argued for an interpretation of coherence whereby 'coherence can lead to truth... under the assumption that natural science is the major source of human knowledge.'¹³ This is the approach to coherence that is discussed in this chapter. In consequence therefore (unless explicitly stated otherwise), 'astrology' in this chapter means 'astrology-as-science'. The following chapter will then consider what it would mean for astrology to cohere, not with science, but with divination.

5.3 The Definition of Science: Introduction

In order to evaluate the coherence of astrology with science, it is necessary to define what is signified by the term 'science'. David Lindberg observed that 'a definition of

¹² Robert Kirk, *Relativism and Reality: A Contemporary Introduction* (London: Routledge, 1999) p. 28.

¹³ Paul Thagard, 'Coherence, Truth, and the Development of Scientific Knowledge', *Philosophy of Science* Vol. 74 No. 1 (Jan 2007) p. 29 (reprinted in: Paul Thagard, *The Cognitive Science of Science: Explanation, Discovery, and Conceptual Change* (Cambridge, Mass.: MIT Press, 2012) p. 82.).

“science”... turns out to be surprisingly difficult to come by’, and this difficulty will be shown in the remainder of this chapter.¹⁴

In some cases, ‘science’ denotes a cosmology. This approach is epitomised in Robert Kirk’s outline of what he called ‘the Core Scientific Story’ (abbreviated to ‘CSS’).¹⁵ According to this, the physical universe began with the Big Bang, planets and stars formed, life began and evolved through ‘blind natural forces’, with language eventually marking humanity off from the rest of life on Earth, making us ‘seem vastly superior, in intellectual capacities’.¹⁶ Kirk continued:

If we hold the Core Scientific Story, our broad theory of the world hangs together pretty well. The CSS has been tried and tested, and provides a remarkably reliable basis for explaining and predicting a great deal of what happens. It strikes most of us as so compelling that we tend to reject claims which conflict with it... and to be favourably disposed to claims which fit in with it.¹⁷

It is sometimes the case that the truth-claims of astrology are rejected because they are seen as conflicting with ‘science’ in this broad sense. This position is frequently encountered in critiques of astrology – witness Dawkins’ assertion that ‘Astrology... demeans astronomy, shrivelling and cheapening the universe with its pre-Copernican dabbings.’¹⁸ Up to this point however, the argument cannot be philosophically conclusive. What astrology is accused of is (to return to the legal idiom), guilt by association – being associated with a cosmology which has largely been vanquished in the West. This evokes further questions, chief among them being whether astrology is indissolubly wedded to pre-Copernican cosmology, or whether it could be vindicated through scientific investigation.

In order to pursue such questions it is necessary to define ‘science’ in a more precise and specific way, and then to consider whether astrology coheres, or not, with science thus defined. As I remarked in chapter 3, although he does not seem to have drawn on

¹⁴ Lindberg, *Beginnings of Western Science*, p.1.

¹⁵ Kirk, *Relativism and Reality*, pp. 16 – 17. The abbreviation is Kirk’s own.

¹⁶ Kirk, *Relativism and Reality*, p. 16, p. 17.

¹⁷ Kirk, *Relativism and Reality*, p. 28.

¹⁸ Dawkins, *Real Romance in the Stars*, p. 18.

epistemological literature, Dawkins exemplified the basic approach of the coherence theory when he suggested, in regard to astrology, that in the absence of concrete evidence, ‘there should be some suggestion of a reason why it might be worth bothering to *look* for evidence.’¹⁹ In order to merit any consideration, then, astrology would need to be plausible in a scientific context – in other words, to *cohere* with science. He illustrated the principle by contrasting graphology and astrology: in the case of graphology, he wrote, since ‘The brain is the seat of the personality and the brain controls handwriting... it is not in principle unlikely that style of handwriting might betray personality.’²⁰ By contrast, he continued, astrology lacked such an explanatory mechanism, having ‘nothing going for it at all, neither evidence nor any inkling of a rationale which might prompt us to look for evidence.’²¹ In order to explore this argument more fully it will be necessary to define the term ‘science’ more precisely, and I turn to that now.

5.3.1 The Relevance of Legal Precedent to the Definition of Science

A basic definition of science was given in chapter 1, in Popper’s description of a focus on ‘events which, on account of their regularity and reproducibility, are in principle inter-subjectively testable.’²² The application of these criteria to astrology was exemplified in chapter 2 by reference to Dean et al’s argument that ‘to adequately test astrology the participation of the astrologer must be eliminated.’²³ In order to pursue and further define the ‘science’ to which these remarks refer, it is necessary to plunge into an account of multiple proposals by philosophers for such a definition, and disagreements between them. I will do this in what follows, using as a unifying thread Judge William Overton’s 1982 ruling in a US court on how science and pseudoscience should be defined and demarcated.²⁴

¹⁹ Dawkins, *Real Romance in the Stars*, p.18.

²⁰ Dawkins, *Real Romance in the Stars*, p. 18.

²¹ Dawkins, *Real Romance in the Stars*, p. 18.

²² Popper, *Logic of Scientific Discovery*, p.23. Popper suggests that his ideas follow those of Kant, though the relationship is not entirely as he thought – see Sergio L. de C. Fernandes, *Foundations of Objective Knowledge: The Relations of Popper’s Theory of Knowledge to that of Kant* (Dordrecht: Kluwer, 1985) pp. 165-67.

²³ Dean et al, *Recent Advances*, p.554.

²⁴ Judge William R. Overton, ‘United States District Court Opinion – McLean v. Arkansas’ in Michael Ruse, *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (Amherst: New York, 1996), p.324 and p.327. Overton’s full judgement is chapter 20 of Ruse, *But is it Science?*, pp.

I see several benefits to referring to this legal precedent. First, it was informed by discussion with philosophers of science, particularly Michael Ruse who appeared as an expert witness in the case.²⁵ Second, Overton's analysis has subsequently emerged as a focus for discussion amongst philosophers.²⁶ Third, Overton's analysis has a close connection to Popper's discussion of science and how it should be demarcated – and Popper is a central figure in attempts to define science.²⁷ Fourth, the fact of Overton's ruling having taken place within a legal context has two implications for the analysis in this chapter: at a philosophical level it makes it possible to pursue the legal analogies that are sometimes used in describing the coherence theory; and, it will help to bring out the moral and legal implications of the debate over astrology's truth-status. This last point requires explanation.

Astrologers have been tried in courts in the past, and this may happen in the future.²⁸ When, in 2008, the EU's 'Consumer Protection from Unfair Trading Regulations' were introduced to the UK, the *Times* carried an article which stated that 'Fortune-tellers and astrologists will... have to tell customers that what they offer is "for entertainment only" and not "experimentally proven".'²⁹ This may recall the words, cited in chapter 1, of Richard Dawkins: "Why, actually, are professional astrologers not jailed for fraud?"³⁰ In similar vein, in their 2008 interview Dean et al concluded:

No astrologer can ethically continue in traditional practice in light of this overwhelming weight of contrary evidence. But when might the false pretences stop? If astrologers have to fool

307 – 331; also at: <http://law.justia.com/cases/federal/district-courts/FSupp/529/1255/2354824/> (accessed 24th August 2019).

²⁵ Michael Ruse, 'Prologue: A Philosopher's Day in Court' in: Michael Ruse, (ed.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (Amherst, NY: Prometheus, 1996) p. 13.

²⁶ As evidenced by the volume cited above: Ruse, *But is it Science?*; also e.g. Kenneth R. Foster and Peter W. Huber, *Judging Science: Scientific Knowledge and the Federal Courts* (Cambridge, Mass: MIT Press, 1999) p. 54; Alexander Bird, *Philosophy of Science* (London: UCL Press, 1998), p.3.

²⁷ The influence of Popper upon Overton is remarked, e.g., by Foster and Huber, *Judging Science*, p. 54.

²⁸ For historic instances of astrologers being challenged as to the legality of their work, see e.g.: Curry, *Prophecy and Power*, p.52 for William Lilly's interrogation by a Parliamentary committee in 1666; Patrick Curry, *A Confusion of Prophets: Victorian and Edwardian Astrology*, (London: Collins & Brown, 1992) pp.145 – 157 for the two trials of Alan Leo; and Karen Christino, *Foreseeing the Future: Evangeline Adams and Astrology in America* (Amherst, MA: One Reed, 2002) pp.85 – 100 for the trial of Evangeline Adams.

²⁹ 'Fortune-tellers targetted in new Consumer Protection Regulations', *The Times* 23rd May 2008; <https://www.thetimes.co.uk/article/fortune-tellers-targetted-in-new-consumer-protection-regulations-jwk8ffjpbdz> (checked 24th August 2019).

³⁰ Dawkins, *Real Romance in the Stars*, p.18.

themselves and their clients to get results, how much longer can they go on doing so?... Longevity seems assured only if any fictional content is clearly identified... Or, alternatively, as is presently the case, if the education and law enforcement systems are too busy with other things to bother with astrologers.³¹

In the wake of the 2008 EU regulations, the UK's Astrological Association felt it necessary to issue advice to their members on how they should characterise the relationship between astrology and science. The central point in their suggestion for a disclaimer that astrologers should use is: 'To date, this analysis is not supported by experiments using the conventional research methods of hard science. Some scientists and most astrologers consider such test methods to be inappropriate for the subject matter and flawed for a variety of reasons.'³² Transposed into the terminology of this chapter, the statement acknowledges that astrology has not proven coherent with science, but interposes a caveat that the 'science' which has found astrology wanting, is 'flawed'. The possibility that the science that has been brought to bear on astrology is somehow wanting will be considered in what follows, particularly in section 5.4.

5.3.1.1 Issues Concerning the Term 'Pseudoscience'

Before setting out Overton's ruling, some discussion of the term 'pseudoscience' is needed. The term has already been encountered in this thesis, and it will emerge in the remainder of this chapter that the definition of science is often bound up with the definition of pseudoscience; science can be defined by contrast with what it is not. The term and its usage are at the same time central to the philosophical definition of science, and problematic for the unbiased evaluation of astrology's truth-status. This subsection attempts to tease these two threads apart, whilst elucidating each.

Karl Popper began to grapple with the problem of how to demarcate science from pseudoscience in 1919, a primary factor being his dissatisfaction with the prevalent definition of science as '*inductive*, proceeding from observation or experiment.'³³

³¹ Dean et al, interview, 2008.

³² Roy Gillett, 'Astrology, that EU Directive and Consumer Law: An Update and a Response' in *Transit – The Astrologer's Newsletter*, Sept/Oct 2008, p. 6.

³³ Karl Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge (3rd edn.)* (London: Routledge & Kegan Paul, 1969 [1963]) pp. 33. Original emphasis. Popper hyphenated 'pseudo-science'

Popper first publicly used the term ‘pseudoscience’ in 1953, and used the distinction between astrology and astronomy as his primary example of the distinction between, respectively, pseudoscience and science.³⁴ He referred to the struggle to separate science and pseudoscience as ‘the problem of demarcation’, or ‘demarcation problem’.³⁵

Although many philosophers have disagreed with the reasoning that led Popper to his characterisation of pseudoscience, use of the term ‘pseudoscience’ as a tool for the definition of science has continued, as has the use of astrology as an example of pseudoscience. Astrology has been taken as the paradigmatic example of a pseudoscience since Popper coined the term – thus for example Peter Pruzan could remark of astrology, ‘This is the classic case in almost all writings on non-science/pseudo-science.’³⁶ In fact the use of astrology as an emblem of pseudoscience has been more consistent than the definition of ‘pseudoscience’ – as evidenced when, sixty years after Popper’s introduction of the term, Sven Ove Hansson wrote:

Scientists have no difficulty in distinguishing between science and pseudoscience. We all know that astronomy is science and astrology not... Scientists can draw the line between science and pseudoscience, and with few exceptions they draw the line in the same place. But ask them by what general principles they do it. Many of them find it hard to answer that question, and the answers are far from unanimous.³⁷

So it is that most philosophical discussion of astrology’s truth-status does not take the truth of astrology as a live issue; its falsity is taken as given. This is largely because astrology is regarded as the epitome of pseudoscience - in fact, as per Hansson, it may be that a stereotypical idea of astrology defines pseudoscience for many people, more

but subsequent usage frequently makes it a compound word. Hacoen has suggested that 1932 is a more accurate date for the emergence of this focus in Popper’s thought: Malachi Haim Hacoen, *Karl Popper – The Formative Years, 1902 – 1945: Politics and Philosophy in Interwar Vienna* (Cambridge University Press: 2000) p. 198, particularly n. 82.

³⁴ Popper, *Conjectures and Refutations*, pp. 33 – 4.

³⁵ E.g. Popper, *Logic of Scientific Discovery*, p. 11; Karl Popper, Patrick Camiller (tr.), *All Life is Problem Solving* (London: Routledge, 1999 [1994 as *Alles Leben ist Problemlösen*] p. 16.

³⁶ Peter Pruzan, *Research Methodology: The Aims, Practices and Ethics of Science* (Cham, Switzerland: Springer, 2016) p. 34.

³⁷ Sven Ove Hansson, ‘Defining Pseudoscience and Science’ in Massimo Pigliucci and Maarten Boudry (eds.), *Philosophy of Pseudoscience: Reconsidering the Demarcation Problem* (Chicago, IL: University of Chicago Press, 2013) p. 61

than does any actual definition of pseudoscience. The fact of astrology's truth-status commonly being taken as a dead letter is shown by the title and content of a philosophical paper by Paul Thagard, 'Why Astrology is a Pseudoscience'.³⁸ Thagard took it as given that astrology *was* pseudoscience: 'Most philosophers and historians of science agree that astrology is a pseudoscience, but there is little agreement on why it is a pseudoscience.'³⁹

The repetitive characterisation of astrology as pseudoscience tends to cement in place the idea of an exclusively binary choice concerning astrology, that it must either be science, or pseudoscience. This is demonstrably a distortion. Pigliucci and Boudry stated that 'if a theory strays from the epistemic desiderata of science by a sufficiently wide margin *while being touted as scientific by its advocates*, it is justifiably branded as pseudoscience' (my emphasis).⁴⁰ As has emerged in this thesis, there is a variety of opinions amongst astrologers regarding whether or not their subject is science, yet to characterise astrology as 'pseudoscience' is to presuppose a particular understanding of astrology ('astrology-as-science') as the only one possible. The term can even show that discussion and analysis is being pre-empted, for – as Cioffi put it - 'pseudoscience' is often used as 'a term of epistemic abuse'.⁴¹ The point was developed by Laudan:

No one can look at the history of debates between scientists and "pseudo-scientists" without realizing that demarcation criteria are typically used as *machines de guerre* in a polemical battle between rival camps. Indeed, many of those most closely associated with the demarcation issue have evidently had hidden (and sometimes not so hidden) agendas of various sorts... [for instance] Popper was out to "get" Marx and Freud. In every case they used a demarcation criterion of their own devising as the discrediting device.⁴²

³⁸ Thagard, 'Why Astrology is a Pseudoscience', pp. 223 – 234.

³⁹ Thagard, 'Why Astrology is a Pseudoscience', p. 223.

⁴⁰ Massimo Pigliucci and Maarten Boudry, 'Introduction: Why the Demarcation Problem Matters' in: Massimo Pigliucci and Maarten Boudry (eds.), *Philosophy of Pseudoscience: Reconsidering the Demarcation Problem* (University of Chicago Press, 2013), p. 2.

⁴¹ Frank Cioffi, 'Pseudo-science' in Ted Honderich (ed.), *The Oxford Companion to Philosophy* (Oxford University Press, 1995), p.726.

⁴² Laudan, Larry, 'The Demise of the Demarcation Problem' in: Michael Ruse, (ed.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (Amherst, NY: Prometheus, 1996), p. 344. (Paper originally in: Cohen, R. S., L. Laudan, *Physics, Philosophy and Psychoanalysis: Essays in Honor of Adolf Grünbaum* (Dordrecht: D. Reidel Publishing Company, 1983) pp. 111 – 127.)

The reason for exploring the term ‘pseudoscience’ in this sub-section is to mark the term’s implication, through repeated usage, of a binary choice for astrology, whereby it would either be science or pseudoscience – with the additional proviso in many cases that the choice has already been settled and that astrology is the very definition of pseudoscience. When a thoroughgoing philosophical analysis of astrology’s truth-status is attempted, it is necessary to exclude such a freight of presumption from the term ‘pseudoscience’ and to take it, neutrally, as one possibility amongst several.

The focus in this chapter on astrology-as-science means the option of astrology being either science or pseudoscience is of prime importance. Even here, it is not necessarily a binary choice, because of the possibility of a third position – a ‘neo-astrology’ – discussed in section 5.3.2.2.

5.3.2 Judge Overton’s Demarcation of Science and Pseudoscience in the case of McLean v. the Arkansas Board of Education

The need to define science emerged as an issue for the USA’s legal system in the twentieth century, due to the conflicts between the creationist, and evolutionary, accounts of the emergence of life on Earth. In such a case in 1982, McLean versus the Arkansas Board of Education, Judge William Overton handed down a ruling on how science and pseudoscience should be defined and demarcated.⁴³ He stated that the essential characteristics of science were as follows:

- (1) It is guided by natural law;
- (2) It has to be explanatory by reference to natural law;
- (3) It is testable against the empirical world;
- (4) Its conclusions are tentative, i.e. are not necessarily the final word; and
- (5) It is falsifiable.⁴⁴

Foster and Huber argued that ‘Overton’s criteria are probably as good a definition of science as one can develop for use in the courtroom. However, the philosophical disputes that underlie them are deep and unresolved, and attempting to demarcate

⁴³ Overton, ‘McLean v. Arkansas’, p.324, p.327.

⁴⁴ Overton, ‘McLean v. Arkansas’ p. 318. The numbering is Overton’s.

science from nonscience requires one to run across a philosophical minefield.’⁴⁵ In this section I will look at the definitions of Overton’s five categories, and in the process survey some of the main examples of ‘philosophical disputes’ to which Foster and Huber alluded. I have reversed the order in which Overton’s final two categories are treated, since this allows for a clearer account of their chronological emergence, and of the philosophical relationship between them. In sections 5.3.2.1 to 5.3.2.4 I set out Overton’s criteria in a relatively straightforward manner; some of the complications with the definition as a whole are then looked at in section 5.3.3.

5.3.2.1 Science Defined Parts 1 and 2: Natural Law

Overton’s first two characteristics of science are that ‘It is guided by natural law’; and, ‘It has to be explanatory by reference to natural law’.⁴⁶ In considering astrology the focus is usually upon the second of these two – a point to which I will return once I have defined them. In his testimony to Overton, Ruse stated:

the most important characteristic of modern science is that it depends entirely on the operation of blind, unchanging regularities in nature. We call these regularities natural laws... any reliance on a supernatural force, a Creator intervening in a natural world by supernatural processes, is necessarily not science.⁴⁷

Overton’s subsequent distinction between two applications of ‘natural law’ is not entirely clear, and Laudan remarked that he found the formulation on this point to be ‘rather fuzzy’.⁴⁸ A close reading shows that the distinction is primarily concerned with the sequence in which events occur. In the first case (‘guided by natural law’), the natural law comes first and guides the formulation and prediction of a phenomenon through which it manifests; in the second case (‘explanatory by reference to natural law’), the claim of a phenomenon comes first with natural law then being developed and/or applied as explanation. The two cases are referred to, albeit briefly, in Overton’s

⁴⁵ Foster and Huber, *Judging Science*, p. 54.

⁴⁶ Overton, ‘McLean v. Arkansas’ p. 318.

⁴⁷ Ruse, Michael, ‘Witness Testimony Sheet: McLean v. Arkansas’ in: Michael Ruse, (ed.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (Amherst, NY: Prometheus, 1996) p. 301.

⁴⁸ Larry Laudan, ‘Science at the Bar – Causes for Concern’ in: Michael Ruse, (ed.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (Amherst, NY: Prometheus, 1996) p. 353. (Paper originally in: *Science, Technology & Human Values* Vol. 7 No. 4 (1982), pp. 16 – 19.)

discussion of the creationist claim of there being only a fixed number of plants and animals. He remarked that ‘There is no scientific explanation for these limits which is guided by natural law and the limitations, whatever they are, cannot be explained by natural law.’⁴⁹

When these principles are applied to astrology it becomes evident that the first case (‘guided by natural law’) is rare. An example would be John Addey’s attempt to ‘revolutionise the study [of astrology] and pave the way for a period of new growth’ through the introduction of ‘harmonics’.⁵⁰ This began with the idea of wave-forms as astrology’s fundamental law, and developed a significantly new approach to chart analysis on that basis. It therefore stands as a rare example of astrologers beginning with natural law and building technique upon it. It is however an exception, and when natural law is discussed in relationship to astrology, the emphasis is overwhelmingly on the second of Overton’s ‘natural law’ categories: astrology is a pre-existing body of technique and interpretation, and the focus is on whether this can be explained by natural law.

Contemporary physics recognises four ‘natural laws’, or fundamental forces: the nuclear force; the electromagnetic force; the weak force; and the gravitational force.⁵¹

Chaichian, Rojas and Tureanu stated, ‘All other interactions observed in Nature can be reduced to these four forces.’⁵² Scientists typically dismiss all four as potential explanations for astrology – for instance Bless stated, ‘one of the many reasons that scientists dismiss astrology... is that such phenomena fall outside the action of the four basic forces; another force would be required and none is known.’⁵³

The idea that astrology does not cohere with science because it lacks explanation in terms of natural law was asserted by Carl Sagan in 1973 when, in dismissing astrology, he argued that ‘We know now that [celestial bodies’] light and gravity have negligible

⁴⁹ Overton, ‘McLean vs. Arkansas’, p. 319.

⁵⁰ Addey, *Harmonics in Astrology*, p. 11.

⁵¹ Masud Chaichian, Hugo Perez Rojas, Anca Tureanu, *Basic Concepts in Physics: From the Cosmos to Quarks* (Dordrecht: Springer, 2014) p. 279.

⁵² Chaichian, Rojas and Tureanu, *Basic Concepts in Physics*, p. 279.

⁵³ Robert C. Bless, *Discovering the Cosmos* (Sausalito, CA: University Science Books, 1996), p.537.

influence on a newborn babe.’⁵⁴ A similar point was made two years later, in the article ‘Objections to Astrology’ by Bok, Jerome and Kurtz published in *The Humanist*.⁵⁵ Bok, Jerome and Kurtz argued that in the modern era, since the distances between celestial bodies and the Earth had been established, ‘we can see how infinitesimally small are the gravitational and other effects produced by the distant planets and the far more distant stars.’⁵⁶ The difficulty of establishing an entirely satisfactory definition of ‘science’ can also, however, be seen here. When he was invited to add his name to the list of scientists who supported Bok, Jerome and Kurtz’s ‘Objections to Astrology’ Sagan refused, commenting, ‘The statement stressed that we can think of no mechanism by which astrology could work. This is certainly a relevant point but by itself it’s unconvincing.’⁵⁷ He went on to cite the theory of continental drift, which lacked a mechanism when it was proposed by Alfred Wegener.⁵⁸ Paul Thagard repeated Sagan’s example of continental drift, also arguing that the lack of a physical mechanism was not a sufficient philosophical basis upon which to categorise astrology as a pseudoscience.⁵⁹ Thagard added the example of the link between smoking and cancer, which was arrived at through statistical analysis without a principle that would account for carcinogenesis.⁶⁰ His point was that both cases would now be regarded as examples of science, even though neither was able to point to a basis in ‘natural law’ when first proposed. Therefore for Thagard, as for Sagan, the absence of an explanation for astrology in terms of natural law did not suffice to define it as pseudoscience.

The idea of natural law as the basis for any truth in astrology is found in an article by Bernulf Kanitscheider (1939 – 2017). He presented many reasons why astrology could not be explained in terms of ‘F-rays’ – a term he introduced as ‘a supposed type of stellar influence (F for fate determinant)’ which would be required if astrology were to

⁵⁴ Carl Sagan, *The Cosmic Connection: An Extraterrestrial Perspective* (New York: Doubleday, 1973) p. 147.

⁵⁵ Bart J. Bok, Lawrence E. Jerome and Paul Kurtz, ‘Objections to Astrology: A Statement by 186 Leading Scientists’, *The Humanist* Vol. 35 No. 5 (Sept – Oct 1975A), pp. 4 – 6. Republished in Bart J. Bok and Lawrence E. Jerome, *Objections to Astrology* (Buffalo, NY: Prometheus Books, 1975B) pp. 9 – 10.

⁵⁶ Bok and Kurtz, ‘Objections to Astrology’, p. 4 (p. 9 in book of the same name).

⁵⁷ Carl Sagan, ‘Objections to Astrology’ (letter to the editor), *The Humanist*, Vol. 36 No. 1 (Jan/Feb 1976) p. 2. Reprinted in: Carl Sagan, *The Demon-Haunted World: Science as a Candle in the Dark* (New York: Ballantine/Random, 1995) pp. 302 – 3.

⁵⁸ Sagan, ‘Objections to Astrology (letter)’, p. 2.

⁵⁹ Thagard, ‘Why Astrology is a Pseudoscience’, p. 225.

⁶⁰ Thagard, ‘Why Astrology is a Pseudoscience’, p. 225.

function.⁶¹ Yet despite the arguments he presented he acknowledged that ‘there can never be *a priori* proof that F-rays are impossible... negative existential statements in science never mean analytical proof that the entities in question cannot exist; it is just a short way of saying that there are no good reasons for believing in the existence of those entities.’⁶²

Further illustration of the lack of finality offered by critiques of astrology in terms of natural law can be found in the work of Percy Seymour. Seymour proposed a model whereby an embryo’s brain would be ‘etched’ with the ‘all-pervading and constantly fluctuating magnetic field of Earth’, which would itself be affected by the solar wind emanating from the solar magnetic field, which in turn would be affected by the planets.⁶³ Seymour thus favoured the electromagnetic force as an explanation; a crucial step in his argument is his use of what he termed ‘magneto tidal resonance’ to explain how the tiny fluctuations of electromagnetic force could be significant in terms of astrological effects on Earth.⁶⁴ The principle of resonance is typically illustrated by examples such as a singer breaking a wine-glass through the dynamic force of their voice, or the modest impact of people walking on a bridge causing it to sway or even collapse. In each case, a relatively weak force is amplified to spectacular effect in its interaction with a body.⁶⁵ Seymour argued that the weak electromagnetic force of the planets resonates in the Sun’s magnetic canals, thus gaining sufficient amplitude to influence life on Earth.⁶⁶

The significance of Seymour’s theory for this chapter takes two forms, neither of which depends on the truth or falsity of the theory in itself. Firstly, the theory illustrates an argument he made that extant evaluations of astrology in terms of natural laws are simplistic: ‘scientists set up a very simple theory, then they shoot down their own theory, and from this they conclude that no scientific theory can be constructed to

⁶¹ Kanitscheider, ‘A Philosopher Looks at Astrology’, pp. 261 – 2.

⁶² Kanitscheider, ‘A Philosopher Looks at Astrology’, p. 262.

⁶³ Percy Seymour quoted in: Percy Seymour, Bronwyn Elko (interviewer), ‘The Magus of Magnetism: An Interview with Dr. Percy Seymour’, <http://cura.free.fr/decem/09seym.html> (checked 24th August 2019). (Originally published in: *The Mountain Astrologer* (Aug/Sept 1998, Issue 80).).

⁶⁴ Seymour, ‘The Magus of Magnetism’.

⁶⁵ Michael M. Woolfson, *Resonance: Applications in Physical Science* (London: Imperial College Press, 2015), pp. 18 – 23.

⁶⁶ Seymour, ‘The Magus of Magnetism’

explain any part of astrology.’⁶⁷ Secondly, ‘It is impossible to rule out all possible physical explanations by considering a limited set of possible physical explanations.’⁶⁸

The limitation of Seymour’s model of magnetic resonance was captured by Victor Mansfield:

more sophisticated models of physical mechanism for astrological influence, such as proposed by Percy Seymour, have far too many speculative links that lack quantitative detail to allow for a reasonable judgment of their value. At this stage it is only a promise of a theory, not a fullblown quantitative physical explanation.⁶⁹

In other words, the most that can be said is that it has not been finally and absolutely proven that there could be no as-yet-undiscovered ‘natural law’, or combination of existing laws, that would explain astrology. In itself this mitigates the challenge posed to astrology’s truth-status by the ‘natural laws’ critique. The crucial next step would be to consider whether *testing* revealed evidence of an expected effect; hence, Seymour remarked, ‘What my theory does is to propose an interpretation... which can be scientifically tested.’⁷⁰ The testing of theories is Judge Overton’s next category.

5.3.2.2 Science Defined Part 3: Testability

Overton included in his ‘five essential characteristics of science’ the requirement that science needs to be ‘testable against the empirical world’.⁷¹ In elucidating how this counted against creationism he remarked:

The scientific community consists of individuals and groups, nationally and internationally, who work independently... Their work is published and subject to review and testing by their peers. The journals for publication are both numerous and varied. There is, however, not one

⁶⁷ Percy Seymour, *The Scientific Basis of Astrology: Tuning to the Music of the Spheres* (London: Quantum/Foulsham, 1997), p. 242.

⁶⁸ Seymour, *Scientific Basis of Astrology*, p. 241.

⁶⁹ Victor Mansfield, ‘An Astrophysicist’s Sympathetic and Critical View of Astrology’, *The Mountain Astrologer* No. 74 (Aug – Sept 1997), p. 47. Also at: <https://www.vicmansfield.com/philosophy-and-cosmology/an-astrophysicists-sympathetic-and-critical-view-of-astrology/> (accessed 24th August 2019).

⁷⁰ Seymour, *Scientific Basis of Astrology*, p. 264.

⁷¹ Overton, ‘McLean vs. Arkansas’, p. 318.

recognized scientific journal which has published an article espousing the creation science theory...⁷²

As will be evident from the discussion in the previous chapter of this thesis, astrology differs from creationism on this point in that it can be, and has been, tested. This point was raised by Thomas Kuhn (1922 - 1996), who observed that ‘astrologers made testable predictions and recognized that these predictions sometimes failed.’⁷³ He therefore argued that ‘To rely on testing as the mark of a science is to miss what scientists mostly do’, and that testability was therefore inadequate as a demarcation criterion.⁷⁴

In similar vein Thagard dismissed ‘testability’ as a demarcation criterion, remarking with particular reference to the work of Michel Gauquelin that ‘astrology is vaguely testable.’⁷⁵ He added that Gauquelin found no evidence to support much of astrology, and concluded: ‘Even if correct, [Gauquelin’s findings] hardly verify astrology, especially considering the negative results found for the most important astrological categories. I have mentioned Gauquelin in order to suggest that through the use of statistical techniques astrology is at least verifiable.’⁷⁶

Gauquelin’s findings were that only a very small sub-set of astrological techniques yielded positive results in tests, on which basis he asserted that there was a ‘gold nugget’ in astrology – a small subset of the entire corpus of astrological techniques which deliver positive results in tests.⁷⁷ This led to him being labelled a ‘neo-astrologer’ by his critics – a label which, by his own account, he initially resented but eventually came to accept, using ‘Neo-Astrology’ as the title of his final book.⁷⁸ I will adopt the term ‘neo-astrology’ for positions of this type in what follows, with Seymour as a protagonist – as evidenced in the following statement:

⁷² Overton, ‘McLean vs. Arkansas’, p. 319.

⁷³ Thomas Kuhn, ‘Logic of Discovery or Psychology of Research?’ in: Imre Lakatos & Alan Musgrave (eds), *Criticism and the Growth of Knowledge: Proceedings of the International Colloquium in the Philosophy of Science, London, 1965, volume 4* (Cambridge: Cambridge University Press, 1970) p. 10.

⁷⁴ Kuhn, ‘Logic of Discovery’, p. 10.

⁷⁵ Thagard, ‘Why Astrology is a Pseudoscience’, p. 225.

⁷⁶ Thagard, ‘Why Astrology is a Pseudoscience’, p. 226.

⁷⁷ First asserted in: Michel Gauquelin, *Cosmic Influences on Human Behavior* (New York: Stein and Day, 1973) p. 20; reiterated (as ‘a grain of gold’) in Gauquelin, *Neo-Astrology*, p.3.

⁷⁸ Gauquelin, *The Truth About Astrology*, p. viii; Gauquelin, *Neo-Astrology*, p. 3.

It is evident that traditional approaches to astrology do not have much scientific data to support the claims made for it by its adherents. On the other hand it is also clear that there is scientific evidence that establishes links between personality and the positions of the planets at birth which cannot be ignored. Much of this evidence comes from the work of Michel Gauquelin.⁷⁹

The possibility of neo-astrology is a complicating factor for discussions of astrology's truth, holding out the prospect that astrology might be both true (since it contains an element that coheres with science) and not true (since a large part, perhaps the great majority of it, does not cohere with science). The principle of testability, therefore, raises two kinds of issues regarding astrology's coherence with science. The first is the possibility of a 'neo-astrology', which complicates the evaluation of astrology's truth-status. The second is that since astrology can be tested, the criterion of 'testability' would demarcate it as science, not pseudoscience.

5.3.2.3 Science Defined Part 4: Falsifiability

The next one of Overton's characteristics of science to be considered is that 'It is falsifiable'; a scientific theory must be 'subject to revision or abandonment in light of facts that are inconsistent with, or falsify, the theory.'⁸⁰ The principles of testability and falsifiability are closely connected. Hence in his testimony to Overton, Ruse stated that 'Falsifiability is another way of looking at what I have called testability.'⁸¹ In this he followed the original protagonist of falsifiability as a crucial characteristic of science, Popper, who asserted that 'Testability is falsifiability'.⁸² This notwithstanding, falsifiability can be distinguished from testability insofar as the former emphasises the desideratum of a test of predicted behaviour which of itself could suffice to overthrow the veracity of a theory.

The principle of falsifiability can be seen, a century before Popper, in Charles Darwin's remark concerning evolution through natural selection: 'If it could be demonstrated that any complex organ existed, which could not possibly have been formed by numerous,

⁷⁹ Seymour, *Scientific Basis of Astrology*, p. 250.

⁸⁰ Overton, 'McLean vs. Arkansas', p. 318, p. 320.

⁸¹ Ruse, 'Witness Testimony Sheet', p. 302.

⁸² Popper, *Conjectures and Refutations*, p. 36.

successive, slight modifications, my theory would absolutely break down.’⁸³ Darwin thus identified a phenomenon which, if it were found, would falsify his theory at a stroke.

When he defined falsifiability as his favoured demarcation criterion, Popper used astrology as an example:

Astrologers were greatly impressed, and misled, by what they believed to be confirming evidence – so much so that they were quite unimpressed by any unfavourable evidence. Moreover, by making their interpretations and prophecies sufficiently vague they were able to explain away anything that might have been a refutation of the theory had the theory and the prophecies been more precise. In order to escape falsification they destroyed the testability of their theory.⁸⁴

The charge of vagueness is a common one – for example, Dawkins argued that ‘all astrology works on the “Barnum Principle” of saying things so vague and general that all readers think it applies to them.’⁸⁵ Similarly, Alec Fisher suggested that ‘Because astrologers make their interpretations and prophecies sufficiently vague, they are able to explain away whatever happens – and nothing refutes the theory.’⁸⁶

Popper contrasted the vagueness of astrology – as he saw it – with Einstein’s theory of general relativity, which entailed that there would be a gravitational attraction from heavy bodies upon rays of light. Popper remarked that ‘the impressive thing about this case is the risk involved in a prediction of this kind. If observation shows that the predicted effect is definitely absent, then the theory is simply refuted.’⁸⁷ His charge against astrology was that it lacked any such crucial test.

⁸³ Charles Darwin, *The Origin of Species* (6th edn.) (London: Oxford University Press, 1956 [1872]) p. 191. Cited as an example of falsifiability by e.g. Jeff Wallace, ‘Introduction: difficulty and defamiliarisation – language and process in *The Origin of Species*’ in: David Amigoni and Jeff Wallace (eds.), *Charles Darwin’s The Origin of Species: New interdisciplinary essays* (Manchester University Press, 1995) p. 35.

⁸⁴ Popper, *Conjectures and Refutations*, p.37.

⁸⁵ Dawkins, ‘Real Romance in the Stars’, p. 18.

⁸⁶ Alec Fisher, *The Logic of Real Arguments* (2nd edn.) (Cambridge University Press: 2004 [1998]) p. 148.

⁸⁷ Popper, *Conjectures and Refutations*, p. 35.

The contrary position – that astrology *can* be falsified – was argued by Kuhn in a critique of Popper’s position: ‘The history of astrology during the centuries when it was intellectually reputable records many predictions that categorically failed.’⁸⁸ Kuhn therefore argued that Popper was wrong to characterise astrology as a pseudoscience on the grounds of vagueness and consequent unfalsifiability. Thagard also challenged Popper’s position, asserting that astrology was in fact open to falsification: ‘falsifiability is only a matter of replaceability by another theory, and since astrology is in principle replaceable by another theory, falsifiability provides no criterion for rejecting astrology as pseudoscientific... astrology does not appear worse than the best of scientific theories, which also resist falsification until alternative theories arise.’⁸⁹

An issue here is that in order to falsify astrology it would be necessary to falsify astrological technique, which comprises a variegated collection of descriptions, interpretative rules and precedents. It is not clear how, or if, it would be possible to refute the entire body of astrological technique with any *single* test. Thus, Gauquelin stated that ‘statistical findings reject the multiplicity of horoscopic factors: zodiac, aspects, houses, transits, directions... the planets Mercury, Uranus, Neptune, Pluto and ... the Sun’.⁹⁰ This is based on a huge range of *different* tests, all of which would need to have yielded negative results in order to falsify astrology-as-science per se. The precedents of Darwin and Einstein’s respective hypotheses being potentially falsified by a single finding, cited above, may not therefore be entirely applicable. What astrology’s critics typically point to, rather than the outcome of any single test, is a cumulative failure by astrology to yield convincing results in a range of different tests.⁹¹

Several people have already been referred to in this thesis who, having practised astrology, gave up their practice in light of test results.⁹² This would make it difficult to defend the argument that astrology is not falsifiable; a more defensible position would be to say that the evidence from tests should lead more astrologers to regard the subject

⁸⁸ Kuhn, ‘Logic of Discovery’, p. 8.

⁸⁹ Thagard ‘Why Astrology is a Pseudoscience’, p. 226.

⁹⁰ Gauquelin, *Neo-Astrology*, p. 168.

⁹¹ Thus for instance at the start of *Tests of Astrology* Dean et al (2016) state that the book will draw on ‘hundreds of tests of astrology... Together these tests look at whether the many thousands of claims in astrology books, periodicals, classes and conferences have a solid basis in reality.’ (p. 3)

⁹² Dean, Hamblin, Mather and Smit in chapter 1; Dwyer in chapter 4.

as having been falsified. Under this reading, where astrology is concerned, the problem of falsifiability resides, not in astrology per se, but in a failure on the part of many astrologers to evaluate their subject in the light of test data.

A full account of this fourth category, falsifiability, therefore merges to a degree with the fifth category, methodology.

5.3.2.4 Science Defined Part 5: Methodology

Overton defined the fourth of his five criteria, which I am treating as the final one, by saying of science: ‘Its conclusions are tentative, i.e. are not necessarily the final word’⁹³ In order to be categorised as science, then, there is a requirement for a tentative approach – or to put it another way, a lack of dogmatism. Overton elaborated on this theme by describing a problem with creationism:

The methodology employed by creationists is another factor which is indicative that their work is not science. A scientific theory must be tentative and always subject to revision or abandonment in light of facts that are inconsistent with, or falsify, the theory. A theory that is by its own terms dogmatic, absolutist, and never subject to revision is not a scientific theory.⁹⁴

Overton’s conclusion was that it would be inaccurate for anyone to describe their methodology as scientific, ‘if they start with a conclusion and refuse to change it regardless of the evidence developed during the course of the investigation.’⁹⁵ A similar point was made by Edward W. James when he argued that, because of a lack on the part of astrologers of: clear thinking and reasoning; readiness to engage with criticism; and following the evidence, astrology should be defined as a pseudoscience.⁹⁶ In summarising his critique of astrology, James argued that:

Astrology simply fails to meet the multifarious demands of legitimate reasoning. This, to be sure, is vague. But rationality is a global notion, one embracing a legion of criteria, procedures,

⁹³ Overton, ‘McLean v. Arkansas’, p. 318.

⁹⁴ Overton, ‘McLean v. Arkansas’, p. 320.

⁹⁵ Overton, ‘McLean v. Arkansas’, p. 320.

⁹⁶ Edward W. James, ‘On Dismissing Astrology and Other Irrationalities’ in: Patrick Grim (ed.), *Philosophy of Science and the Occult* (2nd edn.) (Albany, NY: State University of New York, 1990), p. 29.

techniques, asides, qualifications, and the like. To insist on a precise definition is to misunderstand it. Rationality could be characterized as the appropriate, correct, and self-critical openness to ideas.⁹⁷

A more detailed analysis was provided by Dean et al when I asked them what they saw as the most harmful things to astrology's credibility. They cited five factors: 'refusal to acknowledge the disconfirmation of claims'; 'dramatic disagreement on fundamentals [of horoscopic technique]'; 'poor agreement between astrologers judging the same chart'; 'the stagnation of astrology' – specifically, the lack of 'critical evaluation of ideas and claims'; and 'ignorance of existing research and of problems due to errors in human reasoning'.⁹⁸ Each point amounts to a failure on the part of astrologers to evaluate and adjust (or abandon) their horoscopic techniques in light of the scientific critique of their subject.

Hence, central to the issues for astrology in Overton's criterion of 'methodology' is the status of the horoscope used in western astrology. The issue can be illuminated through Dawkins' remark, 'A planet is so far away that its gravitational pull on a new-born baby would be swamped by the gravitational pull of the doctor's paunch.'⁹⁹ Though it has a satirical slant, the question implicit in Dawkins' statement is substantial: how it could be that the particular group of horoscopic factors used in western astrology would comprise an efficacious and sufficient toolset to enable astrological analysis. A related problem is that, even if it is given (for the sake of argument) that there are natural laws which explain astrology as we know it, and a set of principles exists which would – if settled upon – enable astrological work, is it plausible that would-be astrologers would ever find out what those principles were? Kuhn argued they would not: 'astrology could not have become a science even if the stars had, in fact, controlled human destiny.'¹⁰⁰ His position was based on the view that astrologers' particular failures in astrological readings,

did not give rise to research puzzles, for no man, however skilled, could make use of them in a constructive attempt to revise the astrological tradition. There were too many possible sources

⁹⁷ Edward W. James, 'On Dismissing Astrology', p.34.

⁹⁸ Dean et al quoted in Phillipson, *Astrology Year Zero*, p.157.

⁹⁹ Dawkins, 'Real Romance in Stars', p. 17.

¹⁰⁰ Kuhn, 'Logic of Discovery', pp. 9 – 10.

of difficulty, most of them beyond the astrologer's knowledge, control, or responsibility. Individual failures were correspondingly uninformative, and they did not reflect on the competence of the prognosticator in the eyes of his professional compeers.¹⁰¹

Kuhn proposed that 'puzzle-solving' should be the demarcation criterion between science and pseudoscience, and this overlaps substantially with Overton's category of 'methodology'.¹⁰² Kuhn acknowledged that there was a history of disagreement and criticism between astrologers on matters of technique; his argument was that these did not mature into the pursuit of research puzzles.¹⁰³ It would be difficult to sustain this position in regard to individual astrologers. For instance, Brady described 'deconstructing... and then rebuilding' her astrology after discovering that an astrological client of hers was a murderer. She had not seen this in the horoscope, and attributed this to a shortcoming in her astrological technique at that time.¹⁰⁴ This could well be seen as an astrologer pursuing a research puzzle. The issue for astrology however is that different astrologers often solve their puzzles in different ways; this was discussed in the previous chapter with reference to the advocacy by Cochrane and Press of the inclusion of asteroids in a horoscope, and Frawley's dismissal of such an approach. If astrology were to be demarcated as a science according to the criterion of 'methodology', there would need to be an explanation for why a particular set of horoscopic factors is functional, and why no consensus has emerged on the precise set that is optimally functional.

5.3.3 Issues Arising from Overton's Definition of Science

In section 5.3.2 I discussed the definition of science, with particular reference to Overton's five criteria, so as to have in place a philosophically viable basis from which to evaluate astrology's coherence with science – given, as context, the view that astrology would need to be coherent with science in order to be true. In outlining Overton's five criteria I introduced numerous examples to show that they contain and locate criticisms that are commonly made of astrology-as-science.

¹⁰¹ Kuhn, 'Logic of Discovery', p. 9.

¹⁰² Set out in Kuhn, 'Logic of Discovery' pp. 4 – 5, also: Thomas Kuhn, *The Structure of Scientific Revolutions* (3rd edn.) (University of Chicago Press, 1996 [1962]) pp. 35 – 42.

¹⁰³ Kuhn, 'Logic of Discovery', p. 9 n. 2.

¹⁰⁴ Brady in Phillipson, *Astrology Year Zero*, p. 113.

All five of Overton's criteria can be seen to partake in, and expand upon, Dean et al's assertion that 'to adequately test astrology the participation of the astrologer must be eliminated.'¹⁰⁵ 'Natural law' is defined by forces and processes that science can describe and measure; 'testability' and 'falsifiability' focus on excluding subjectivity – and with it, the possibility of error – from the process of evaluation; and the criterion of 'methodology' raises a host of procedural issues which – if they were answered, in the case of astrology – would make it possible to create a computer program that would interpret horoscopes as well as, or better than, could be accomplished by a (human) astrologer. In introducing Overton's criteria I cited Foster and Huber's assertion that 'attempting to demarcate science from nonscience requires one to run across a philosophical minefield.'¹⁰⁶ I have cited criticisms of each of Overton's principles, and in order to further the definition of science it is necessary to evaluate these.

The criticisms that are faced by attempts to demarcate science from pseudoscience, and thereby define science, are of two kinds. The first finds fault with a specific demarcation criterion, and argues in favour of another one. In this approach it is typically assumed that there should be a single demarcation criterion, rather as there might be a single correct answer to a mathematical problem. A 'portfolio' approach such as Overton's, where several criteria are enumerated, is therefore implicitly dismissed as too diffuse – even if the 'correct' criterion were included, its presence would be marred by the inclusion of criteria that are unnecessary or simply wrong. The second type of criticism is more general, being aimed at the entire principle of demarcating science from pseudoscience. I will now evaluate these two kinds of criticism in order.

5.3.3.1 Objection #1 to Overton: Only one demarcation criterion is needed

As has already been seen, Thagard dismissed both 'natural law' and 'falsifiability' as demarcation criteria in his discussion of astrology as pseudoscience. At the conclusion of that article he proposed a 'principle of demarcation' as follows:

¹⁰⁵ Dean et al, *Recent Advances*, p.554.

¹⁰⁶ Foster and Huber, *Judging Science*, p. 54.

A theory or discipline which purports to be scientific is pseudoscientific if and only if:

- 1) it has been less progressive than alternative theories over a long period of time, and faces many unsolved problems; but
- 2) the community of practitioners makes little attempt to develop the theory towards solutions of the problems, shows no concern for attempts to evaluate the theory in relation to others, and is selective in considering confirmations and disconfirmations.¹⁰⁷

In terms of Overton's categories, this is close to 'methodology'. In relation to Overton's five categories, the question that therefore arises is whether four of them are surplus to requirement. I suggest that by investigating Thagard's model it becomes apparent that all of Overton's demarcation criteria lurk therein. Thus, to say of a theory that it is 'selective in considering confirmations and disconfirmations' is to assume that it is susceptible to testing, and that the principle of falsifiability is not adequately applied in the evaluation of those tests. Further, Thagard's principle presupposes that astrology (as his example of pseudoscience) would – if true – work through natural law, understood to mean the four natural forces or something very like them. This assumption is necessary to supply the context in which a true astrology would necessarily be capable of consensual, progressive, evaluation and development of the type he specifies as characteristic of science. The assumption is that a true astrology would necessarily see disagreements over technique resolved over time on the basis of ongoing research – rather as, for example, puzzles concerning the motions of the planets were gradually resolved through the work of figures such as Copernicus, Galileo and Kepler. The assumed model is therefore of a unitary reality which can be understood in terms of natural, physical, forces. Hence I suggest that Thagard's 'principle' actually enfolds, unacknowledged, all of Overton's criteria.

If someone were to argue against this, and to suggest that in the case of Thagard, or in that of some other exponent of a single demarcation criterion, no other possible criterion was implicated, then it would be possible to question whether this single criterion would not be reinforced by the addition of other criteria. For example, if 'methodology' were taken as the sole criterion that sufficed to characterise astrology as pseudoscience, it is difficult to see how the case would not be strengthened if an absence of natural laws

¹⁰⁷ Thagard, 'Why Astrology is a Pseudoscience', p. 228, pp. 228-9.

through which astrological forces could operate were factored in. Similarly, if a natural law with the potential to explain astrology *were* discovered, or if test results emerged that supported astrological claims, the case for considering astrology to be pseudoscience would surely be weakened thereby. Since it is thus possible to find Overton's criteria in Thagard's criterion, and since Overton's criteria can evidently be considered separately, I conclude that Thagard created only the *appearance* of a single criterion – beneath which a plurality of criteria are evident.

When philosophers seek for a single demarcation criterion, the seeking is itself conditioned by assumptions about the nature of reality and truth. Those assumptions are along the lines that every problem is like a mathematical equation where there is one right answer. In examining demarcation criteria in the context of astrology, a strong case emerges for allowing a plurality of criteria. This of course is – as discussed in section 5.2 above – the approach of the coherence theory.

5.3.3.2 Objection #2 to Overton: Demarcation is Innately Flawed

The second philosophical claim to be explored here, is that all attempts to demarcate science and pseudoscience are innately flawed. Thus Laudan argued, with specific reference to Overton's judgement, that 'we ought to drop terms like "pseudo-science" and "unscientific" from our vocabulary; they are just hollow phrases which do only emotive work for us.'¹⁰⁸ At the heart of his objection was the fact that Overton's criteria, and anything like them, could appear to reward failure. Thus – for example – in the above discussion of astrology, the fact of the subject being testable counted against astrology being described as pseudoscience, despite its poor performance in those tests. As Laudan put it, '*by virtue of failing the epistemic tests to which they are subjected, these views guarantee that they satisfy the relevant semantic criteria for scientific status!*'¹⁰⁹

Laudan stated that he did not intend, by his argument, to lend any support to creationism, astrology, or any other 'crank claim which makes ascertainably false

¹⁰⁸ Laudan, 'Demise of Demarcation Problem', p. 349.

¹⁰⁹ Laudan, 'Demise of Demarcation Problem', p. 347. Original emphasis.

assertions' (he supplied eighteen further examples).¹¹⁰ The question then would only be whether astrology is false because it is pseudoscience, or false because it is bad science.¹¹¹ As Thomas Nickles remarked of Laudan's argument, 'the move rejects the traditional demarcation problem only to raise another, at least equally difficult issue: how can philosophers of science (and other members of society) reliably discriminate good science from bad science?'¹¹² Further, it seems at least plausible that the characterisation of 'bad science' would involve something similar to Overton's five categories, so that – at least for the purposes of this thesis – Laudan's objection would lack substance.

An objection that overlaps with that of Laudan, is that any attempt to define science is pointless because there is no such thing. This perspective is associated particularly with Feyerabend, as when he argued that '*the events, procedures and results that constitute the sciences have no common structure*'.¹¹³ In another text he stated,

*'the success of "science" cannot be used as an argument for treating as yet unsolved problems in a standardized way. That could be done only if there are procedures that can be detached from particular research situations and whose presence guarantees success. The thesis [i.e. Feyerabend's own thesis] says that there are no such procedures.'*¹¹⁴

In discussing astrology, Feyerabend remarked (as was seen in chapter 3) that its modern evolution had reduced 'interesting and profound ideas' to 'caricatures more adapted to the limited understanding of its practitioners', and lamented the lack of research, the lack of effort 'to proceed into new domains and to enlarge our knowledge of extra-terrestrial influences'.¹¹⁵ This suggests that he might have some sympathy with the application of at least some of Overton's categories to astrology. This notwithstanding, Feyerabend's overarching point – that science is not a monolithic entity – has begun to

¹¹⁰ Laudan, 'Demise of Demarcation Problem', p. 346.

¹¹¹ The suggestion that Laudan's alternative to pseudoscience is 'bad science' is from: Michael Ruse, 'Introduction to Part Four: The Philosophical Aftermath' in: Michael Ruse, (ed.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (Amherst, NY: Prometheus, 1996) p. 335.

¹¹² Thomas Nickles, 'The Problem of Demarcation' in: Massimo Pigliucci, Maarten Boudry (eds.), *Philosophy of Pseudoscience* (Chicago, IL: University of Chicago Press, 2013) p. 111.

¹¹³ Paul Feyerabend, 'Introduction to the Chinese Edition' in his *Against Method* (3rd edn.) (London: Verso, 1993 [1975]), p. 1. Original italics.

¹¹⁴ Feyerabend, *Against Method*, p. 2.

¹¹⁵ Feyerabend, *Science in a Free Society*, p. 96.

emerge through developments within science itself, and can best be pursued by considering these developments.

5.4 The Relevance of ‘New Science’

In the previous chapter of this thesis I quoted David Mermin’s remark that astrology, if true, ‘would require a massive radical reconstruction of our current understanding of the world.’¹¹⁶ A recurrent argument from astrologers in the last forty years has been that such a radical reconstruction has in fact emerged within science, with quantum theory and/or chaos theory often being mentioned specifically. Thus for example in the last book he wrote, Michel Gauquelin stated that ‘Scientists must reinstate the idea of astrology in their Universe [...] We have an urgent need for a new paradigm to be able to understand the Universe.’¹¹⁷ He went on to suggest that quantum mechanics and chaos theory might represent such a new paradigm.¹¹⁸ In the terms used in this chapter, the argument from astrologers has been that these developments indeed recast astrology’s coherence with science – two instances of such arguments follow.

In 1979 Dane Rudhyar, in a review of Dean et al’s *Recent Advances in Natal Astrology*, wrote that his approach to astrology could not

be understood by people who, though they take the position that they speak for “science”, are apparently little acquainted with or refuse to accept the new concepts of many atomic and nuclear physicists who, as “philosophers of science” are attempting to give meaning to the evolution in scientific thought produced by quantum physics and related concepts.

The writers of the book (and probably most astrologers occupied with statistical research) seem to have a Newtonian idea of the universe. On page 2 they dispose summarily of the holistic approach which nevertheless is the foundation of the most recent physical theories in which the universe is shown to be a web of relationships...¹¹⁹

The astrologer Charles Harvey (1940 – 2000) remarked that ‘it will indeed require a “New Science” to accommodate astrology’ and I will use the term ‘new science’ to refer

¹¹⁶ Mermin, ‘Abandoning Preconceptions’, p. 642.

¹¹⁷ Gauquelin, *Neo-Astrology*, p.167.

¹¹⁸ Gauquelin, *Neo-Astrology*, p. 176.

¹¹⁹ Rudhyar, ‘Review’ (of Dean et al’s *Recent Advances*), p.83.

to developments in science since Newton, particularly quantum and chaos theories.¹²⁰

In sub-section 5.4.6 I will also refer to the theory of evolution.

5.4.1 The Intractability of ‘New Science’

Before any discussion of quantum and chaos theories a caveat should be made: these fields are contentious, obscure and significantly unresolved, so that there is a certain irony in turning to them in the hope of clarifying the truth-issues in astrology.¹²¹ Hence for example Lee Smolin said of quantum mechanics:

Absolutely the first thing that must be said about it is that the discussions and arguments begun in the 1920s about the meaning of the quantum theory remain unresolved. Many, apparently equally viable, interpretations of the theory have been proposed, and there is now as much contention among the experts as there has ever been.¹²²

In similar vein, regarding chaos theory, Zuchowski stated that ‘it is still not clear how chaos should be defined and how the large number of coexisting chaos definitions relate to each other’.¹²³ In what follows I will therefore aim to discuss aspects of the new science that are not merely conjectural.

5.4.2 Quantum Physics

Quantum physics addresses the behaviour of atoms and sub-atomic particles. It had its beginnings in the work of Max Planck (1858 – 1947) and Albert Einstein (1879 – 1955), but is particularly associated with discoveries made in the 1920s by a group of physicists that included Max Born (1882 – 1970), Niels Bohr (1885 – 1962), Erwin

¹²⁰ Charles Harvey, ‘Ideal Astrology’ in A. T. Mann (ed.), *The Future of Astrology* (London: Unwin Hyman, 1987) p. 74. In using the term ‘new science’ I also follow the usage of e.g. James Gleick, *Chaos – Making a New Science* (London: Abacus, 1993).

¹²¹ For instance nine different interpretations of quantum phenomena are iterated in: Bruce Rosenblum and Fred Kuttner, *Quantum Enigma: The Spooky Interaction of Mind and Matter* (London: Gerald Duckworth, 2007) pp.156 – 166, with the proliferation of theories similarly described at: Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007) p.287.

¹²² Lee Smolin, *The Life of the Cosmos* (London: Orion, 1997), p.242.

¹²³ Lena C. Zuchowski, *A Philosophical Analysis of Chaos Theory* (Cham, Switzerland: Palgrave Macmillan, 2017) p. 1.

Schrödinger (1889 – 1961) and Werner Heisenberg (1901 – 1976).¹²⁴ Victor Weisskopf summarised an important part of the field when he remarked that whilst in Newtonian or classical physics, ‘fundamental concepts were not too different from those of our everyday experience’, when physicists attempted to understand atoms and molecules they found that ‘the ideas and concepts formed in dealing with the objects in our immediate environment no longer suffice. Surprising forms of behavior were observed that not only needed a different language but required new concepts...’¹²⁵

A prime example of such ‘surprising forms of behavior’ is the property of quantum entanglement – called ‘the characteristic trait of quantum mechanics’ by Schrödinger.¹²⁶ This phenomenon is also known as non-separability, or ‘spooky action at a distance’ as Einstein put it.¹²⁷ The physicist Bernard d’Espagnat stated that “we may safely say that non-separability is now one of the most certain general concepts in physics”.¹²⁸ Rosenblum and Kuttner attempted to draw out the implications by positing a ‘reasonable world’ as described by Newtonian physics, in which objects would be both real (‘the properties of an object should not be created by their observation’) and separable (‘they should affect each other only by physical forces, not by weird, faster-than-light “influences”).¹²⁹ The outcome of tests established that ‘Our world does not have both reality and separability – one, perhaps, but not both.’¹³⁰ They continued by stating, ‘we immediately admit to not truly understanding what the world being unreal

¹²⁴ Kent A. Peacock, *The Quantum Revolution: A Historical Perspective* (Westport, CT: Greenwood, 2008) particularly pp. 1 – 62, and timeline at pp. 175 – 183.

¹²⁵ Victor F. Weisskopf, ‘Prologue: What is quantum mechanics?’ in Ajoy Ghatak and S. Lokanathan, *Quantum Mechanics: Theory and Applications* (Dordrecht: Springer/Kluwer 2004) p. xvi. Originally in: Victor Weisskopf, *The Privilege of Being a Physicist* (New York: W. H. Freeman, 1989).

¹²⁶ ‘When two systems, of which we know the states by their respective representatives, enter into temporary physical interaction due to known forces between them, and when after a time of mutual influence the systems separate again, then they can no longer be described in the same way as before, viz. by endowing each of them with a representative of its own. I would not call that *one* but rather *the* characteristic trait of quantum mechanics, the one that enforces its entire departure from classical lines of thought. By the interaction the two representatives [the quantum states] have become entangled.’ – Erwin Schrödinger, ‘Discussion of Probability Relations Between Separated Systems’ in *Proceedings of the Cambridge Philosophical Society* No. 31, 1935, p.555. Cited (with the remark that ‘[i]t is still hard to improve upon Schrödinger’s formulation’ in James Ladyman and Don Ross, *Every Thing Must Go – Metaphysics Naturalized* (Oxford University Press, 2007), p.19.

¹²⁷ The exact quotation, from Einstein’s letter to Max Born of 3rd March 1947, was: ‘physics should represent a reality in time and space, free from spooky actions at a distance.’ In: Max Born, Albert Einstein; Irene Born (tr.), *The Born-Einstein Letters 1916-1955* (Basingstoke: Macmillan, 2005), p.155.

¹²⁸ Bernard d’Espagnat, ‘Quantum Logic and Non-separability’ in Jagdish Mehler (ed.), *The Physicist’s Conception of Nature* (Boston: Kluwer, 1973), p.734.

¹²⁹ Rosenblum and Kuttner, *Quantum Enigma*, p. 143.

¹³⁰ Rosenblum and Kuttner, *Quantum Enigma*, p. 143. The tests referred to were tests of Bell’s inequality, devised and carried out by John Stewart Bell (1828 – 1990).

or having a universal connectedness would imply.’¹³¹ One consequence that is clear is that it is not possible to exclude the observer in the quantum realm. As Henry Stapp put it, ‘A principal conceptual difference between classical mechanics and its quantum successor is that the former is exclusively physical whereas the latter is essentially psychophysical.’¹³²

5.4.3 Chaos Theory

Chaos theory emerged through the confluence of several researchers’ work. The term ‘chaos’ was introduced by the mathematicians Tien-Yien Li (1945 -) and James A. Yorke (1941 -) in 1975.¹³³ The work of Li and Yorke was based on discoveries made by Edward Lorenz (1917 – 2008), which in turn had substantial parallels with the work of Henri Poincaré (1854 – 1912) – both also mathematicians. Poincaré had shown that Newtonian laws were only adequate to describe a planetary system in which two planets were involved; and that when a third was involved, it was no longer possible *precisely* to predict the planets’ movements.¹³⁴ In the estimation of Lorenz, ‘Poincaré was not seeking chaos’ and therefore did not pursue the implications of his discovery.¹³⁵ Lorenz, who rediscovered the principle of chaos through his study of meteorological systems, described it as follows:

in some dynamical systems it is normal for two almost identical states to be followed, after a sufficient time lapse, by two states bearing no more resemblance than two states chosen at random... Systems in which this is the case are said to be *sensitively dependent on initial conditions*.¹³⁶

Sensitive dependence on initial conditions is widely accepted as the definition of, or at least the central element of, chaos theory.¹³⁷ This has become popularly known as ‘the

¹³¹ Rosenblum & Kuttner, *Quantum Enigma*, p. 143.

¹³² Henry Stapp, ‘Quantum Mechanical Theories of Consciousness’ in Max Velmans, Susan Schneider (eds.), *The Blackwell Companion to Consciousness* (Malden, MA: Blackwell, 2007) p. 300.

¹³³ Tien-Yien Li and James A. Yorke, ‘Period Three Implies Chaos’, *The American Mathematical Monthly* Vol. 82 No. 10 (Dec 1975) pp. 985 – 992.

¹³⁴ Henri Poincaré, ‘Sur le Problème des Trois Corps et les Équations de la Dynamique’, *Acta Mathematica* 13 (1890), pp. 1 – 270.

¹³⁵ Edward N. Lorenz, *The Essence of Chaos* (University of Washington Press, 1993) p. 121.

¹³⁶ Lorenz, *Essence of Chaos*, p. 8.

¹³⁷ Lorenz stated that ‘With a few... qualifications... sensitive dependence can serve as an acceptable definition of chaos’ (Lorenz, *Essence of Chaos*, p. 8). Ingraham stated that although ‘a consensus has not

butterfly effect’, the principle behind which is that a tiny input such as the beating of a butterfly’s wings in Brazil could cause (or prevent) a tornado in Texas.¹³⁸

Another element of chaos theory is *self-similarity*. This is a property of certain objects whereby – as James Gleick put it – there is ‘symmetry across scale’, which should be understood to imply ‘recursion, pattern inside of pattern.’¹³⁹ This quality was implicit in Lorenz’s work but is best known, and illustrated, in Benoît Mandelbrot’s fractal geometry.¹⁴⁰ In Mandelbrot’s fractals, patterns show similarities that transcend scale – if one zooms in, what one is looking at is (more or less) similar to what one had been looking at. Self-similarity is also a property of physical objects – a commonly-used example being coastlines, which show a similar level of detail and complexity whether one looks at them from a height of (say) a kilometre or ten metres.¹⁴¹

5.4.4 The Relevance of the New Science to Astrology’s Truth-Status

An illustration of the new science’s significance for astrology can be found in the account of Bernadette Brady, who was working as a microbiologist when she encountered astrology.¹⁴² In light of her scientific background, she commented, ‘I never understood why astrology worked’ until she encountered quantum and chaos theories, in the light of which, ‘it would be a real surprise if astrology *didn’t* work! If we take Bell’s theorem, and link that to Mandelbrot and fractals, then really it has to work; there has to be an interconnectedness without scale in time or in size.’¹⁴³

yet been reached on the precise definition of this term [i.e. chaos]... sensitive dependence... is, by far, the most important ingredient of “chaos”. In fact... [it] is accepted by most as the definition of chaos.’ Richard Lee Ingraham, *A Survey of Nonlinear Dynamics (“Chaos Theory”)* (Singapore: World Scientific Publishing, 1992) p. 3.

¹³⁸ The image of the butterfly was used by Lorenz in a talk he gave in 1972 which remained unpublished until it appeared as Appendix 1 of Lorenz, *Essence of Chaos*, pp. 179 - 182. It was popularised by James Gleick in *Chaos – Making a New Science*, particularly p. 8, pp. 20 – 23.; Lorenz discussed the image, and Gleick’s popularisation, at Lorenz, *Essence of Chaos*, pp. 14 – 15.

¹³⁹ Gleick, *Chaos – Making a New Science*, p.103.

¹⁴⁰ For self-similarity being implicit in Lorenz’s work: Gleick, *Chaos – Making a New Science*, pp.115-6.

¹⁴¹ Benoit Mandelbrot, ‘How Long is the Coast of Britain? Statistical Self-similarity and Fractional Dimension’, *Science* 156 (1967) pp. 636 – 638.

¹⁴² For her background as a microbiologist: ‘An Interview with Bernadette Brady by Garry Phillipson’ (recorded 31st May 1998): <http://www.skyscript.co.uk/brady.html> (checked 5th January 2018).

¹⁴³ Brady quoted in Phillipson, *Astrology Year Zero*, pp. 177 - 178.

In similar vein, Ken McRitchie discussed quantum and chaos theories as a congenial context for astrology, likening them particularly to the principle of macrocosm-microcosm correspondence (discussed in chapter 2 of this thesis). Writing of quantum entanglement, he stated: 'It is remarkable how well this quantum observation accommodates the non-causal principle of astrological coevolution. Whereas physical forces are mediated only locally, there also exists an unmediated non-local connection between the microcosm and the macrocosm.'¹⁴⁴

These examples typify a focus commonly found when astrologers discuss the new science; in terms of Overton's categories, the focus is on 'natural law'. Brady and McRitchie, above, propose possible ways in which the new science might make good the lack of suitable explanatory principles for astrology in terms of causal principles. Dennis Elwell characterised the significance of the new science by emphasising the demands of Newtonian science from which he considered astrology to be liberated:

The new physics... contrasts starkly with the old Newtonian model, with its simplistic reliance on cause and effect. The new orthodoxy is agreed that Newtonian physics no longer adequately explains what is happening. Yet when it comes to the business of discrediting astrology, scientists happily scamper back to Sir Isaac's arms, demanding to be told how the planets can exert significant gravitational or electromagnetic effects at a distance.¹⁴⁵

The principal claim of astrologers who claim support from the new science – including those cited above – is therefore that 'natural law' should now allow the possibility of a non-causal connection between horoscopic factors and life on Earth which might circumvent Kanitscheider's requirement for 'F-Rays'.

The relegation of Newton's laws is widely accepted by scientists. For instance, Joseph Ford stated that 'deterministic Newtonian dynamics has been dealt a lethal blow. Relativity eliminated the Newtonian illusion of absolute space and time; quantum theory eliminated the Newtonian dream of a controllable measurable process; and chaos

¹⁴⁴ Kenneth D. McRitchie, *Environmental Cosmology – Principles and Theory of Natal Astrology* (Toronto: Cognizance Books, 2004), p.48.

¹⁴⁵ Dennis Elwell, *Cosmic Loom* (2nd edn.), (London: Urania Trust, 1999 [1987]), p. 8.

eliminates the Laplacian fantasy of deterministic predictability.’¹⁴⁶ Further, the status of the four fundamental forces, discussed above, has changed. Simkin remarked that ‘Chaos theory... has shown that we cannot hope to reduce all scientific explanations to manifestations of the basic laws of physics.’¹⁴⁷ Chaichian, Rojas and Tureanu qualified their description of the four fundamental forces (cited earlier) by remarking that ‘purely quantum effects, such as Pauli’s principle, lead to effects close to the idea of forces’¹⁴⁸

If it is accepted that the new science has made astrology more plausible by undermining the Newtonian universe’s claim to have defined reality once and for all, this is only the beginning of a discussion however. The issue was identified by Dean et al: ‘Even if science did turn out to be based on say interconnectedness, astrologers have not explained how this would support the idea that the heavens reflect what happens on Earth, let alone ideas such as Leos being generous... Crucial steps in the argument are missing.’¹⁴⁹

In terms of Overton’s criteria, this objection from Dean et al amounts to saying that even if the ‘natural law’ criteria are set to one side, there are still issues around astrology’s failure to vindicate itself through tests, and the methodology used by astrologers. This line of criticism was acknowledged to some extent by McRitchie when he wrote, ‘This book is intended to explore only the principles and theory of astrology without hypotheses or testing’.¹⁵⁰ The problem remains for astrologers, of explaining how it would be that the specific set of factors used in the horoscopes of western astrology would serve as an adequate epitome of the state of the cosmos (the macrocosm) in regard to an astrologer’s client (the microcosm). Brady suggested a mechanism that might bridge this gap:

Over time as a pattern grows and spreads through a culture, it would eventually acquire what is known in complexity as “lock-in”: the condition that occurs when a particular expression of an idea, object or pattern has become so dominant in the culture that it becomes resistant to change, and acquires homeostatic qualities. Thus, for example, Venus around 3,500 B.C.E., may well

¹⁴⁶ Joseph Ford, ‘What is Chaos, that we should be mindful of it?’ in Paul Davies (ed.), *The New Physics* (Cambridge University Press, 1989) p. 354.

¹⁴⁷ Colin Simkin, *Popper’s Views on Natural and Social Science* (Leiden: E. J. Brill, 1993) p. 97.

¹⁴⁸ Chaichian, Rojas and Tureanu, *Basic Concepts in Physics*, p. 279.

¹⁴⁹ Dean et al quoted in: Phillipson, *Astrology Year Zero*, pp.159-60.

¹⁵⁰ McRitchie, *Environmental Cosmology*, p. 14.

have begun to absorb symbols and meanings... Thus the astrological meanings of the planets are co-created by culture's engagement with the self-organising and naturally emergent astrological patterns.¹⁵¹

Brady's is not a complete account. For instance it does not explain how Venus would absorb symbols; also, the positions of the planets as seen from the Earth are a fundamental part of horoscopic analysis, and it is difficult to see how human engagement with the planets could determine their ongoing positions. This notwithstanding, Brady's remarks are important for the present discussion in two ways. First, they show the *type* of explanation that would be needed in order for a scientific account of astrology to develop: an explanation of why the horoscope as western astrologers know it should be an adequate epitome of the macrocosm. Second, they introduce an interpretative crossroads for astrology. Brady's account endows horoscopic factors with meanings based on intersubjective expectations, which have become stable at this point in history. In consequence, astrology should function as a scientific discipline – as if the planets were emitting Kanitscheider's F-rays. If however the interaction between human beings and horoscopic factors were not dependent upon a gradual build-up of meaning over time, the theoretical possibility would emerge of horoscope-reading as necessarily bound up with the subjectivity of the individual astrologer.

At this point the discussion reaches the periphery of this chapter's subject-matter, coming close to the subject of astrology-as-divination which is discussed in the following chapter. It is however necessary to reflect this as a potential consequence of applying the new science to astrology. Thus for instance the philosopher and astrologer Will Keepin, in a discussion of astrology's relationship to the new science, remarked that 'what is so profound about astrology is that, by virtue of its connection to planets and stars, it also precisely models the interpenetration between the invisible realms of meaning and the physical space-time universe.'¹⁵² He subsequently made it clear that he was not proposing an 'astrological mechanism':

¹⁵¹ Bernadette Brady, *Astrology, a Place in Chaos* (Bournemouth: The Wessex Astrologer, 2006), p.104.

¹⁵² William Keepin, 'Astrology and the New Physics', *The Mountain Astrologer* Oct/Nov 2009, p.42. Keepin quoted and developed ideas from David Bohm, which can be found particularly at: David Bohm, *Unfolding Meaning* (London: Routledge, 1987) pp.90-3.

Astrological correlations are not due to physical causes; they are due to the mystical oneness of existence... Pluto does not send down “rays” that influence us to do Plutonic things. The reality is far more profound and subtle than that. The planets and the Earth and humanity are the same living process – unfolding at vastly different scales.¹⁵³

A similar sentiment came from the physicist Roger Jones, who – in light of the new physics – remarked:

A very powerful spatial metaphor alternative to our own may be discovered through a sympathetic consideration of astrology. The unity and connectedness of all things is reflected in the astrological blending and equating of the inner and outer realms of consciousness and space. Astrology holds up a mirror to human consciousness. It reflects the medieval feeling of being imbedded in the cosmos.¹⁵⁴

Many astrologers have turned to the new physics to support their subject, but Jones is unusual in being a physicist whose involvement with the new physics led him somewhat toward astrology. He told me, ‘I would not claim that I “practised” astrology’; he would however say that ‘I used to cast charts to understand astrology and its mechanics better’.¹⁵⁵ A greater number of physicists have seen the new science as opening the way to religious belief – for instance, John Polkinghorne wrote that, in the light of quantum theory and chaos theory, ‘an honest appeal to science cannot be used to discredit belief in God’s providence acting within the divinely ordained open grain of nature.’¹⁵⁶ Russell Stannard, elaborating on Polkinghorne’s thought, proposed a ‘picture of God using random quantum probabilities at the atomic level, these slight effects being subsequently magnified by the chaos theory mechanism to produce significant changes at the macroscopic level where we humans operate.’¹⁵⁷

The discussion of a religious understanding of astrology – which includes the possibility that astrology’s operation is a function of divine providence, or of mystical oneness –

¹⁵³ Keepin, ‘Astrology and the New Physics’, pp.45 – 6.

¹⁵⁴ Roger S. Jones, *Physics as Metaphor* (London: Abacus, 1983), pp.63-4.

¹⁵⁵ Roger S. Jones, email to the author, 10th July 2009, quoted with permission. In the same email he added, in response to my suggestion that it can be problematic to have one’s name linked with astrology, ‘there’s no doubt that my “reputation” and standing in the University of Minnesota Physics Department suffered because I wrote *Physics as Metaphor*.’

¹⁵⁶ John Polkinghorne, *Science and the Trinity: The Christian Encounter with Reality* (New Haven, CT: Yale University Press, 2004) p. 5.

¹⁵⁷ Russell Stannard, *The God Experiment* (London: Faber and Faber, 1999) p. 40.

belongs to the next chapter of this thesis. I have included this brief discussion in order to show that there are interpretations of the new science which point in that direction. The ‘new science’ also carries philosophical consequences which do not pertain directly to astrology, but which are relevant to science’s epistemological status and therefore indirectly relevant to the discussion of the truth-status of astrology-as science.

5.4.5 Philosophical Consequences of the ‘New Science’

In introducing the coherence theory in section 5.2 I discussed the theory’s reliance upon a system that would tether it to reality. This implies a realist view of science – characterised by Chalmers as a view whereby science ‘describes not just the observable world but also the world that lies behind the appearances’.¹⁵⁸ The new science tends to undermine science’s realist credentials, an issue I will now discuss.

Lee Smolin summed up a large part of the epistemological issue raised by the new science when he stated:

There is at least one good reason not to believe the physics that is taught in most courses for nonscientists. It isn’t true. [...] Newtonian physics is useful, even if it isn’t true, as an approximation that helps us to understand many different phenomena. But it is completely discredited as an answer to any fundamental question about what the world is.¹⁵⁹

As has been seen in this chapter, astrologers are often tempted to claim victory for astrology because the science whose demands it was unable to fulfil has been overturned. This might however be premature, for – as Smolin remarked – Newtonian physics is still ‘useful... as an approximation that helps us to understand many different phenomena.’ This point can be illustrated and developed by citing Richard Dawkins. Dawkins sought to address misapplications (as he saw it) of the new science, and began by remarking that ‘Quantum uncertainty, and chaos theory, have had deplorable effects upon popular culture’.¹⁶⁰ He continued:

¹⁵⁸ A. F. Chalmers, *What is This Thing Called Science?* (3rd edn.) (Buckingham: Open University Press, 1999), p.226.

¹⁵⁹ Lee Smolin, *Life of the Cosmos*, p.25.

¹⁶⁰ Richard Dawkins, *Science and Sensibility* (A lecture at Queen Elizabeth Hall, London, 24th March 1998). The text was moved behind a paywall in 2013/14 but may still be viewed at:

Quantum theory and chaos theory, each in their own peculiar ways, may call into question the predictability of the universe, in deep principle. This could be seen as a retreat from nineteenth century confidence. But nobody really thought that such fine details would ever be predicted in practice, anyway. The most confident determinist would always have admitted that, in practice, sheer complexity of interacting causes would defeat accurate prediction of weather or turbulence. So chaos doesn't make a lot of difference in practice. Conversely, quantum events are statistically smothered, and massively so, in most realms that impinge on us. So the possibility of prediction is, for practical purposes, restored.

In the late twentieth century, prediction of future events *in practice* has never been more confident or more accurate. This is dramatic in the feats of space engineers. Previous centuries could predict the return of Halley's Comet. Twentieth century science can hurl a projectile along the right trajectory to *intercept* it, precisely computing and exploiting the gravitational slings of the solar system. Quantum theory itself, whatever the indeterminacy at its heart, is spectacularly accurate in the experimental accuracy of its predictions. The late Richard Feynman assessed this accuracy as equivalent to knowing the distance between New York and Los Angeles to the width of one human hair. Here is no licence for anything-goes, intellectual flappers, with their quantum theology and quantum you-name-it.¹⁶¹

By looking through the template of the three theories of truth, it is possible to see a significant move in Dawkins' argument here. Earlier in this chapter (section 5.3) I showed that he had – in effect – invoked both the correspondence and coherence theories in order to explain why astrology was unlikely to be true. In the passage above, he argued that the reason we know the laws of science to be true, is that they work; our knowledge of them enables us to accomplish impressive tasks. The theory that the truth of a proposition (etc.) should be characterised by whether or not it works is – as discussed in chapter 3 – the pragmatic theory of truth. Dawkins' implicit invocation of this theory echoes Smolin's observation that 'Newtonian physics is useful', and this carries an epistemological freight: if Newtonian science's truth is characterised by its usefulness, then it lacks the realist credentials that are often assumed for it by Dawkins and many others.¹⁶² Newtonian science then would be simply a useful practice. This position is argued for by Da Costa and French: 'on our account Newtonian mechanics is

https://web.archive.org/web/20080430153508/http://www.simonyi.ox.ac.uk/dawkins/WorldOfDawkins-archive/Dawkins/Work/Articles/1998-03-24science_and_sensibility.shtml (accessed 25th August 2019).

¹⁶¹ Dawkins, *Science and Sensibility*.

¹⁶² Lee Smolin, *Life of the Cosmos*, p.25.

regarded “as if” it were true, rather than true per se, within its limited domain, and this helps express what we mean when we say that it should be taken as pragmatically true only.’¹⁶³ A corollary of this is that if astrology were judged to work (in the sense of, ‘to be useful’) then it would be true in the same way as Newtonian science is true. The evaluation of astrology’s truth in terms of its usefulness will be discussed, in the context of the pragmatic theory of truth, in Chapter 7 of this thesis.

The point at issue here can be further illustrated by reference to Thagard, who – in discussing modern science – implicitly advocated a pragmatic approach to truth. After noting that quantum theory and general relativity ‘are two theories that individually possess enormous explanatory coherence’, he cited Edward Witten: ‘The basic problem in modern physics is that these two pillars are incompatible. If you try to combine gravity with quantum mechanics, you find that you get nonsense from a mathematical point of view.’¹⁶⁴ (Gravity is involved because ‘general relativity... is Einstein’s theory of gravity’¹⁶⁵.)

On this point, Thagard argued that it would be ‘folly’ to reject either quantum theory or general relativity, given the amount of evidence that supported each, and suggested that therefore the best approach was to find an epistemic framework within which the two could co-exist: ‘from the perspective of a coherence theory... It may turn out at a particular time that coherence is maximised by accepting a set *A* that is inconsistent, but other coherence-based inferences need not be unduly influenced by the inconsistency, whose effects may be relatively isolated in the network of elements.’¹⁶⁶

It is implicit in Thagard’s approach that the requirement for coherence between scientific theories can and should be overridden when it is the case that both theories *work*. Such an approach is therefore pragmatic and pluralist. In order to develop the

¹⁶³ Newton C. A. Da Costa and Steven French, *Science and Partial Truth: A Unitary Approach to Models and Scientific Reasoning* (Oxford University Press, 2003) p. 89.

¹⁶⁴ Paul Thagard, *Coherence in Thought and Action* (Cambridge, Mass: Bradford/MIT, 2000) p. 74; Edward Witten interviewed in: P. C. W. Davies and Julian Brown, *Superstrings: A Theory of Everything?* (Cambridge University Press, 1988) p. 90, cited at p. 74 of Thagard.

¹⁶⁵ Witten quoted in Davies and Brown, *Superstrings*, p. 90.

¹⁶⁶ Thagard, *Coherence in Thought and Action*, p. 74, p. 75.

argument here, it is relevant to introduce evolution through natural selection – another form of scientific understanding that has developed since Newton’s day.

5.4.6 Evolution through Natural Selection

Reflecting upon the mysteries opened up by quantum physics, Dawkins said:

if I have difficulties with quantum theory, it is not for want of trying and certainly not a source of pride. As an evolutionist, I endorse Steven Pinker’s view, that Darwinian natural selection has designed our brains to understand the *slow* dynamics of *large* objects on the African savannahs. Perhaps somebody should devise a computer game, in which bats and balls behave according to a screened illusion of quantum dynamics. Children brought up on such a game might find modern physics no more impenetrable than we find the concept of stalking a wildebeest.¹⁶⁷

This reiterates the point that humanity’s fundamental understanding of the world has a pragmatic basis, oriented toward survival in the savannah – not, therefore, oriented toward knowing things as they are in themselves, if such knowledge is even possible. A similar point was made by Smolin:

the reason creatures like us see a “classical world” made up of stable objects that move in predictable ways is that we have evolved by natural selection to be sensitive to this way of perceiving reality... alternative ways of telling the story of the world are equally consistent and equally real, but a creature that adopted such a way of seeing the world could not have counted so regularly on having lunch. We have evolved sensory organs that process information about where things are and how they are moving because that is what we must do to survive.¹⁶⁸

This idea – that the world of human experience is filtered and conditioned by the perceptual mechanism, and could therefore in principle be experienced very differently – is something that Dawkins repeated in his book *The God Delusion*.¹⁶⁹ He does not seem to recognise the extent to which this relativises science and thereby undermines

¹⁶⁷ Dawkins, *Science and Sensibility*.

¹⁶⁸ Smolin, *Life of the Cosmos*, p.266.

¹⁶⁹ Richard Dawkins, *The God Delusion* (London: Bantam, 2006), pp. 405 – 8.

many of his claims – for instance, that ‘Science is the only way we know to understand the real world’.¹⁷⁰

The point can be underlined, and reframed from the perspective of quantum theory, with a quotation from Werner Heisenberg (1901 – 1976):

What we observe is not nature itself, but nature exposed to our method of questioning. Our scientific work in physics consists in asking questions about nature in the language that we possess and trying to get an answer from experiment by the means that are at our disposal. In this way quantum theory reminds us, as Bohr has put it, of the old wisdom that when searching for harmony in life one must never forget that in the drama of existence we are ourselves both players and spectators.¹⁷¹

This enquiry into the new science, therefore, somewhat diminishes the aspirations held by some for science to embody a definitive and absolute ontological vision. To this extent, it becomes possible to consider that astrology may not need to cohere with science in order to be true. The nature, and viability, of an alternative perspective will be considered in the following chapter.

5.5 Conclusion

In summing up this chapter it is necessary to distinguish between astrology and astrology-as-science. It has been seen that Overton’s criteria accommodate and clarify extant discussion regarding the truth-status of astrology-as-science. New science makes Overton’s ‘natural law’ categories less problematic for astrology by introducing the possibility that astrology could work through (say) quantum entanglement, but there still remains a formidable case to be answered by anyone who would argue that astrology is true *as science*. What would be needed to make this convincing is an explanation of other issues based on Overton’s criteria, such as why the result from tests is generally poor and why astrologers have not converged on one particular set of

¹⁷⁰ Richard Dawkins, ‘Thoughts for the Millennium’, *Microsoft Encarta Encyclopedia 2000* (Redmond, WA: Microsoft Corporation, 1993 – 9) (Cited and discussed in: Mary Midgley, *Science and Poetry* (London: Routledge, 2001) p. 9, 141.

¹⁷¹ Werner Heisenberg, *Physics and Philosophy – The Revolution in Modern Science* (New York: Harper, 1958) p.58. The first words are frequently cited in popular books on modern science, e.g.: Fritjof Capra, *The Tao of Physics* (London: Fontana/Collins, 1976 [1975]), p.144.

techniques. Enquiry into science has, however, raised the possibility that astrology does not necessarily need the imprimatur of science in order to be considered true. This will be considered in the following chapter. Another issue that emerged in discussing the truth of science is that it may need to be defined – partly or entirely – as pragmatic truth. If pragmatic truth is key then it follows that astrology should also be evaluated in the light of pragmatic truth, and a discussion of that possibility will follow in chapter 7.

Chapter 6: Coherence Theory Part 2 – Coherence with Divination

6.1 Introduction

This chapter continues and concludes the analysis of the coherence theory of truth which began in the previous chapter. Whereas chapter 5 focused on coherence with science, this chapter will consider the possibility that a system other than science could take the role of an explanatory system with which astrology might cohere. This follows my contention that a case has not been proven for taking Newtonian science as the only ‘explanatory system’ with which astrology’s coherence should be evaluated. An overarching caveat for this enquiry is that it will need to be made clear how and why – under an alternative explanatory system – scientific evaluation would not be crucial for astrology’s truth-status.

This chapter will therefore consider what ontological characteristics the universe would need to possess, in order that astrology would be both outside the purview of science, and true. In pursuing this enquiry I will draw particularly on the philosophy of William James, which will allow me to establish a context in recent Western philosophy that could accommodate astrology. The discussion of James will continue, with the focus moving to his pragmatic theory of truth, in chapter 7.

In chapter 1 I said that this thesis would mainly consider science and divination as explanatory systems for astrology, with ‘divination’ being defined in Curry’s sense of ‘an ongoing dialogue with more-than-human agents.’¹ Divination thus defined will (from sub-section 6.3.2 below, onwards) be a central theme in this chapter. It emerged in the previous chapter that the definition of ‘science’ has typically involved the exclusion of subjective mental factors. In pursuing this chapter’s theme I will therefore begin by taking in a number of terms (such as intuition and psi) that have been mooted by various commentators as useful or essential, mental, components of horoscopic astrological work. This will bring perspective to the possibility of a non-scientific account of astrology; it will also elucidate the meaning, and epistemological consequences, of the term ‘astrology-as-divination’.

¹ Curry, ‘Embodiment, Alterity and Agency’, pp.114-5. Previously cited in chapter 1.

6.2 Intuition and Types of Knowledge

The significance of the term ‘intuition’ for astrology was introduced in chapter 4, where data was cited that suggests a significant majority of astrologers regard it as a necessary factor in a good astrological interpretation.² Its relevance, for astrology, can be suggested by quoting an introductory text-book for astrologers by Tracy Marks. After describing the significance of individual horoscopic factors, and discussing procedures that could be used to arrive at an interpretation of the chart as a whole, she stated: ‘such a rational approach is usually not sufficient for conducting meaningful readings. Only by drawing upon our intuition as well as our intellect can we penetrate to the essence of a chart and interpret it in a vital and relevant manner.’³

It is necessary to clarify what ‘intuition’ means in an astrological context, since that is generally far from clear. This point was made by Cornelius when – after reviewing scientific approaches to astrology – he concluded:

If there is anything in astrology at all, we are bound to conclude that *there is some other element involved*. Usually when this conclusion is reached, a vague mention is made of intuition and the analysis of the phenomenon is taken no further. But as far as I am concerned, far from being the end of the discussion this has to be the place where we begin.⁴

Edward F. Kelly remarked that contemporary accounts of intuition often ‘reduce it without residue to “unconscious cerebration” – the automatic, fast, parallel, cheap, and often-reliable but sometimes error-prone out-of-sight operations of a nervous system tuned to its environment by factors such as genetics, learning and conditioning, priming, and so on.’⁵ Whilst believing there to be some truth in this formulation, he considered that ‘it does not by any means exhaust the subject matter.’⁶ In order to tease out the significations of ‘intuition’, and its possible relevance to astrology, I will apply a

² The data was cited from Campion, *Astrology and Popular Religion*, p. 181, table 12.7 (ix).

³ Tracy Marks, *The Art of Chart Interpretation: A Step-by-Step Method of Analyzing, Synthesizing and Understanding the Birth Chart* (3rd edn.) (Lake Worth, FL: Ibis Press, 2009 [1979 as *The Art of Chart Synthesis*]) p. 79.

⁴ Cornelius, *Moment of Astrology*, p. 55. Original emphasis.

⁵ Edward F. Kelly, ‘Parapsychology in Context: The Big Picture’ in Etzel Cardeña, John Palmer and David Marcusson-Clavertz, *Parapsychology: A Handbook for the 21st Century* (Jefferson NC: McFarland, 2015) p. 36. As examples of the approach to intuition which he criticised, Kelly cited: D. Eagleman, *Incognito: The Secret Lives of the Brain* (NY: Pantheon, 2011); D. Kahneman, *Thinking, Fast and Slow* (NY: Farrar, Strauss, and Giroux, 2011); D. G. Myers, *Intuition: Its Powers and Perils* (New Haven, CT: Yale University Press, 2002).

⁶ E. F. Kelly, ‘Parapsychology in Context’, p. 36.

distinction, proposed by Marta Sinclair, between three forms of intuition based on ‘where the information is located in relation to us’.⁷ These three forms of intuition are: *local internal*; *local external*; and *nonlocal*.⁸

6.2.1 Local External Intuition

The first two forms of intuition in this schema are *local*. As Sinclair put it:

Local intuition assumes that intuitive answers are a result of processed information that we contain in the raw form already (as mental schemas or affectively coded memories...) or we have been in contact with (through reading, learning, noticing our environment or other form of cursory exposure...).⁹

Local external intuition, by definition, arises from sources of information that are *external* to the phenomenon in question – for the purpose of the present enquiry, therefore, external to the astrologer and their astrology.

This can be exemplified through a part of Adrian Duncan’s description of how to conduct an astrological consultation. He suggested that when a client arrived the astrologer should take notice of their clothes – ‘Colour choice can be incredibly revealing’ – their jewellery, and use of perfume, all of which could yield insight into the client’s personality and issues.¹⁰ These are potential sources of information that are *local* to the astrologer – so long as the reading is being done in person – and yet *external* to astrology, since the information does not derive therefrom. The use of such information was discussed in chapter 3 as ‘cold reading’.

Tests of astrology typically aim to exclude local external intuition – in other words, to preclude knowledge from any source other than astrology itself. I take it that this is valid as an aspiration, though not as an absolute requirement, for any evaluation of astrology. The distinction between ‘aspiration’ and ‘requirement’ seems necessary because in an approach predicated upon a responsive cosmos (which will re-emerge during this chapter), it may not be possible for the individual to prescribe the medium

⁷ Marta Sinclair, ‘An integrated framework of intuition’ in Marta Sinclair (ed.), *Handbook of Intuition Research* (Cheltenham: Edward Elgar, 2011) p. 12.

⁸ Sinclair, ‘Integrated framework of intuition’, pp. 12 – 13.

⁹ Sinclair, ‘Integrated framework of intuition’, pp. 6 – 7. Original emphasis.

¹⁰ Adrian Duncan, *Doing Time on Planet Earth* (Shaftesbury: Element, 1990) p. 92. This is similar to the advice of Noel Tyl on observing a client, as cited in chapter 4 of this thesis (Noel Tyl, *Noel Tyl’s Guide* p. 61).

through which the cosmos will respond. This is however a hypothetical point only, since – as will be discussed – the model of a responsive, dialogical, universe also invalidates the idea of testing astrology in a scientific sense.

6.2.2 Local Internal Intuition

When an astrologer interprets a horoscope, they may not be entirely conscious of the mental processes involved. There would be some ‘unconscious cerebration’ (in Edward F. Kelly’s term) – intuition as a process below the threshold of awareness which would draw out the significance of a specific horoscope, in light of the rules for interpretation and knowledge of precedents which are already in the astrologer’s mind.¹¹

If astrology cohered with an explanatory system in which local internal intuition played a significant role, this could invalidate many tests of astrology. That can be illustrated by reference to the New York Suicide Study, which – as discussed in chapter 4 – proceeded on the basis that ‘there would be some pattern discernible in the astrological charts of suicides’.¹² In her analysis of the tests, Nona Press argued that each suicide had unique qualities which might be discerned by an astrologer, but which would remain opaque to statistical analysis.¹³ On this basis it would be possible to argue that astrology’s truth-status cannot be assessed through tests which exclude the involvement of astrologers and their intuition.

It could, however, still be a viable option to test astrological work because it is possible, as discussed in chapter 4, to conduct tests whilst treating the working of astrology as mysterious, a ‘black box’.¹⁴ In this case astrologers would be asked to do *whatever it is they do* with test horoscopes, the accuracy of their interpretations being evaluated subsequently. (Such tests were discussed in chapter 4 with specific reference to the work of Shawn Carlson, Vernon Clark and Leo Knecht.) In such cases science, in the form of statistical analysis, could test *if* astrological analysis yields significant results. It

¹¹ Edward F. Kelly, ‘Parapsychology in Context: The Big Picture’ in Etzel Cardeña, John Palmer and David Marcusson-Clavertz, *Parapsychology: A Handbook for the 21st Century* (Jefferson NC: McFarland, 2015) p. 36.

¹² Press, *New Insights into Astrology*, p.311.

¹³ Nona Press, interview, 2005.

¹⁴ Using the term ‘black box’ in the sense introduced in chapter 4 through reference to Rescher, *Predicting the Future*, p.106.

could not, however, determine whether the results should be attributed to astrology, or to the astrologer – a point to which I will return in section 6.9 below.

6.2.3 Nonlocal Intuition

To introduce the category of nonlocal intuition, Sinclair raised the possibility that ‘we may tune into information that is outside of our mental and physical presence.’¹⁵ She described this possibility as ‘highly speculative’, but suggested that nonetheless ‘we should reserve space in our framework for this possibility.’¹⁶ In order to develop this account, and to draw out its synonymy with some existing accounts of astrology, it is necessary to make explicit the connection between nonlocal intuition and a group of terms subsumed by the blanket term ‘paranormal’ – as when, for instance, Raymond Trevor Bradley suggested that nonlocal intuition should be seen as a similar type of phenomenon to ESP, clairvoyance and psi.¹⁷

Some astrologers have argued for the relevance of such phenomena to astrology: Cornelius suggested that the working of astrology involved an element which ‘is non-regulated and mysterious... and – a significant clue – characterised as paranormal.’¹⁸ He also discussed psi as an explanatory term for the working of astrology.¹⁹ In a questionnaire issued by Marcia Moore in 1959 to 900 astrologers (two thirds in the USA, one third elsewhere), 38% of respondents claimed to use astrological rules combined with intuition; 5% to primarily use ‘psychic inspiration’; and 11% to use a combination of the two.²⁰ She identified ‘psychic inspiration’ as being evidenced in cases where, rather than working through a horoscope in a systematic, rule-based way, astrologers ‘obtain an immediate “psychic impression” which leads them to search out

¹⁵ Sinclair, ‘Integrated framework of intuition’, p. 13.

¹⁶ Sinclair, ‘Integrated framework of intuition’, p. 7.

¹⁷ Raymond Trevor Bradley, ‘Resolving the enigma of nonlocal intuition: a quantum-holographic approach’ in: Marta Sinclair (ed.), *Handbook of Intuition Research* (Cheltenham: Edward Elgar, 2011) p. 201.

¹⁸ Cornelius, *Moment of Astrology*, pp. 76 – 7.

¹⁹ Cornelius, *Moment of Astrology*, p. 76. He refers mainly to ‘Psi-Neptune’ because of the consonance between the symbol and meaning of Neptune and psi.

²⁰ For population of the survey: Charles A. Jayne Jr., ‘Forward’ in Marcia Moore, *Astrology Today: A Socio-Psychological Survey (Research Bulletin No. 2, Astrological Research Associates)* (New York: Lucis Publishing, 1960) p. iii; for survey results, Marcia Moore (Moore, 1960) p. 127.

and find confirming evidence.’²¹ Before pursuing such possibilities further, it is necessary to consider how terms such as ‘paranormal’ and ‘psychic’ are defined.

6.3 The Definition of ‘Paranormal’, ‘Psychic’ and ‘Psi’

A variety of terms exist to denote phenomena that are currently beyond the comprehension of science. Thus for example C. J. Ducasse (1881 – 1969) wrote, in 1954, of ‘diverse queer kinds of occurrences that have variously been termed “psychic”, “metapsychic”, “para-psychological”, “paranormal”, or... “Psi” phenomena.’²² He proposed the term “‘paranormal’ phenomenon’ as an umbrella term for ‘any occurrence whose cause is neither that from which it ordinarily results, nor any other yet known to the natural sciences as capable of causing it.’²³ This is, according to Braude, the ‘account of paranormality’ that is ‘probably the one most often advanced by parapsychologists and laymen alike’.²⁴ Ducasse was refining an extant definition. The term ‘parapsychology’ was coined by Max Dessoir (1867 – 1947) in 1889; he argued that where phenomena such as visions were concerned, it was best to regard them as belonging to an ‘as yet unrecognized border zone between normal and abnormal pathological states’ rather than necessarily indicating mental illness.²⁵ Hans Driesch (1867 – 1941) subsequently introduced ‘parapsychology’, and ‘paranormal’ to the English-speaking world.²⁶

²¹ Moore, *Astrology Today*, p. 127.

²² C. J. Ducasse, ‘The Philosophical Importance of “Psychic Phenomena”’, *The Journal of Philosophy*, Vol. 51, No. 25, p. 810.

²³ C. J. Ducasse, ‘Paranormal Phenomena, Nature, and Man’, *Journal of the American Society for Psychical Research* Vol. 45 No. 4 (October 1951) p. 130.

²⁴ Stephen E. Braude, *ESP and Psychokinesis: A Philosophical Examination (Revised Edition)* (Parkland, FL: Brown Walker, 2002 [1979]) p. 199.

²⁵ Max Dessoir, ‘Die Parapsychologie’, *Sphinx* 8 (June 1889) pp. 341 – 2; translation from Corinna Treitel, *A Science for the Soul: Occultism and the Genesis of the German Modern* (Baltimore MD: Johns Hopkins University Press, 2004) p. 46.

²⁶ ‘Parapsychology’ occurs at e.g. Hans Driesch, ‘Presidential Address (1926): Psychical Research and Established Science’, *Proceedings of the Society for Psychical Research* Vol. XXXVI (Parts 97 – 103), 1928 p. 172 (Part 99); ‘Paranormal’ at e.g. Hans Driesch, Theodore Besterman (tr.), *Psychical Research: The Science of the Super-Normal* (London: G. Bell & Sons, 1933) p. vii. Driesch’s role in introducing the terms is identified in: Rico Sneller, ‘Science of the Future: Hans Driesch and Parapsychology’ in Hein van Dongen, Hans Gerding and Rico Sneller (eds.), *Wild Beasts of the Philosophical Desert: Philosophers on Telepathy and Other Exceptional Experiences* (Newcastle upon Tyne: Cambridge Scholars Publishing, 2014) p. 118.

A closely-related term is ‘psi’, which was introduced in 1942 by Robert H. Thouless (1894 – 1984) and Bertold Paul Wiesner (1901 – 1972).²⁷ The name of the Greek letter psi (Ψ) was adopted in order to explicitly defer explanation for the phenomena formerly known by terms such as ‘extra-sensory perception’ and psychokinesis.²⁸ Thus Thouless argued, ‘The objection to the term “extra-sensory perception” is that it suggests a theory of the nature of the phenomenon in question, and I see no reason to suppose that this is a true theory and some reason for suspecting that it is false.’²⁹ He also rejected, as potentially misleading, terms such as telepathy, clairvoyance, and precognition, and urged the use henceforth of ‘some term that implies no theory as to the kind of mental process this is.’³⁰ He continued, ‘I suggest that we should use a term proposed by Dr Wiesner, and call this group of effects the “psi phenomena”, a term which has the important negative merit that it implies no theory as to their nature.’³¹ In what follows I will use ‘paranormal’ and ‘psi’ interchangeably and synonymously.

A 2005 Gallup Poll showed that 73% of Americans believed in some form of the paranormal.³² The phenomena believed in included: extrasensory perception, or esp; the haunting of houses; ghosts; telepathy; clairvoyance; and astrology. Esp was the most widely-believed in with 41% of the sample believing in it, while 25% believed in astrology.

The explicit absence of theory puts psi phenomena outside science’s explanatory powers – a point made by Stanley Krippner:

Psi phenomena are usually defined as organism-environment interactions in which it appears that information or influence has occurred that can not be explained through science’s understanding of

²⁷ Robert H. Thouless, ‘The Present Position of Experimental Research into Telepathy and Related Phenomena’, *Proceedings of the Society for Psychical Research* Vol. 47, Part 166, (1942) pp. 1 – 19. In this first published reference to psi phenomena, Thouless described it as ‘a term proposed by Dr Wiesner’ (p. 5).

²⁸ Psychokinesis was added to ESP as a component of psi in: R. H. Thouless and B. P. Wiesner, ‘The PSI Processes in Normal and “Paranormal” Psychology’, *Proceedings of the Society for Psychical Research* 48 (Part 174), 1947 p. 179; an instance of ‘Ψ’ being used rather than ‘psi’ occurs on the same page .

²⁹ Thouless, ‘Present Position of Experimental Research’, p. 3.

³⁰ Thouless, ‘Present Position of Experimental Research’, p. 4, p. 5.

³¹ Thouless, ‘Present Position of Experimental Research’, p. 5.

³² David W. Moore: ‘Three in Four Americans Believe in Paranormal’: <http://news.gallup.com/poll/16915/Three-Four-Americans-Believe-Paranormal.aspx> (checked 24th August 2019)

sensory-motor channels. In other words, these reports are *anomalous* because they appear to stand outside of modern science's concepts of time, space, and energy.³³

The lack of a positive characterisation of psi is sometimes seen as being such a problem as to invalidate the entire field of study – as when, for instance, James E. Alcock complained that, given its definition as anomalous, ‘we are left with no idea as to when psi might occur, and more importantly to the scientist, as to when it will *not* occur’ as a consequence of which, ‘we cannot compare conditions where psi could not occur to those where, were it to exist, it could be observed... [and therefore] it becomes impossible ever to truly ‘control’ the conditions of an experiment.³⁴ This illustrates the coherence theory at work, without being identified as such: the essence of Alcock's argument is that a field of study should cohere with contemporary mainstream science as an explanatory system, and if it does not, it – together with the evidence for its existence – should be disqualified from consideration.

6.3.1 Evidence for Psi, and Consequences Thereof

There is a considerable body of research to support the existence of paranormal phenomena or psi. In 1958 Jung opined of J. B. Rhine's research into the paranormal: ‘The positive results of his experiments elevate these phenomena to the rank of undeniable facts.’³⁵ Forty-five years later Adrian Parker and Göran Brusewitz – after detailing the main bodies of research – concluded that ‘science has succeeded in lifting the [psi] phenomena that the public commonly reports, into the laboratory and imposing checks and controls, and yet the phenomena do appear to persist.’³⁶ The professor of statistics Jessica Utts stated, ‘The data in support of precognition and possibly other related phenomena are quite strong statistically, and would be widely accepted if they

³³ S. Krippner, ‘Parapsychology and Postmodern Science’ in D. R. Griffin (ed.) *The Reenchantment of Science: Postmodern Proposals* (Albany NY: SUNY Press, 1988) p. 132.

³⁴ James E. Alcock ‘Give the null hypothesis a chance: Reasons to Remain Doubtful About the Existence of Psi’, *Journal of Consciousness Studies* Vol. 10 No. 6 – 7 (2003) p. 34.

³⁵ C. G. Jung, ‘Flying Saucers: A Modern Myth’ in: C. G. Jung, R. F. C. Hull (tr.) *The Collected Works of C. G. Jung Volume 10: Civilization in Transition* (2nd edn.) (London: Routledge & Kegan Paul, 1970 [1958 as *Ein moderner Mythos: Von Dingen, die am Himmel gesehen werden*]) p. 481, para 780.

³⁶ Adrian Parker and Göran Brusewitz ‘A Compendium of the Evidence for Psi’, *European Journal of Parapsychology* (18: 2003), p. 49.

pertained to something more mundane. Yet, most scientists reject the possible reality of these abilities without ever looking at data!’³⁷

After citing Utts, Dean Radin outlined six different tests of psi in each of which ‘the overall odds against chance, after careful consideration of all known experiments investigating the same topic, are assessed to be over a billion to one.’³⁸ Astrology therefore – if understood as psi – should show positive evidence in tests on a similar scale to other tests of psi phenomena. To that extent, therefore, the truth-status of astrology would be within the purview of scientific methodology and to that extent coherent with science. In the next sub-section however I will consider how divination (and therefore astrology-as-divination) can be defined vis-à-vis psi, for there at least two possible accounts here – one of which admits of susceptibility to scientific testing, and one of which does not.

6.3.2 Two Versions of Divination

Smith and Moddel remarked that ‘Divination... is often a form of psi’ and, in their subsequent discussion, discussed the evaluation of divinatory outcomes in terms of their statistical significance.³⁹ The only factor that qualified the subject of their study as divination was the involvement of divinatory tools such as the *I Ching* or tarot cards. The implicit view of divination was of a subject which is susceptible to scientific testing. A more explicit statement on the definition of divination can be found in a work by Dean Radin: ‘Divination involves perceiving beyond the ordinary boundaries of space and time... Today the euphemism *remote viewing* is more commonly used.’⁴⁰ Radin characterised remote viewing as involving a ‘viewer’ who is asked to sketch or describe a ‘target’. ‘The target [he continued] might be a remote location or individual, or a hidden photograph, object, or video clip. All possible paths for sensory leakage are

³⁷ Jessica Utts, ‘Appreciating Statistics (2016 ASA Presidential Address)’, *Journal of the American Statistical Association*, Vol. 111 No. 516 (2016) p. 1379.

³⁸ Dean Radin, *Real Magic: Ancient Wisdom, Modern Science, and a Guide to the Secret Power of the Universe* (New York, NY: Harmony, 2018), p. 97. (The experiments he mentioned are categorised by being based on one of the six types of psi phenomena: telepathy, remote viewing, presentiment, [anticipation of] random number generators, and the Global Consciousness Project (Radin, *Real Magic*, p. 98).

³⁹ Paul H. Smith and Garret Moddel, ‘Applied Psi’ in Etzel Cardeña, John Palmer and David Marcusson-Clavertz, *Parapsychology: A Handbook for the 21st Century* (Jefferson NC: McFarland, 2015) p. 385.

⁴⁰ Radin, *Real Magic*, pp. 86 – 7. Original emphasis.

blocked, typically by separating the target from the viewer by distance... or by hiding the target in an opaque envelope, or by selecting a target in the future.’⁴¹

The paradigm here is essentially that of an information retrieval system, under which information exists – inert and accessible, as if it were data on a hard drive. The role of the research subject is then to try and retrieve that information. Such a position can also be seen when Dean and Kelly, in their investigation into the relevance of psi to astrology, defined psi by citing John Beloff’s statement that it means that the mind can ‘extract information from an object other than its own brain.’⁴² The model is one in which information exists and the role of the test subject (whether psi or astrology is being tested) begins and ends with accessing that information and reporting it accurately.

The information retrieval model does not, however, convey the full sense of ‘divination’ as I use the term in this thesis. In particular, it does not comprehend the principle of ‘an ongoing dialogue with more-than-human agents’ in Curry’s definition, and the implications of that phrase.⁴³ I contend therefore that a distinction is necessary between divination in Radin’s sense, and divination in Curry’s sense – as ‘dialogue with more-than-human agents’.⁴⁴

In order to demarcate the two senses of ‘divination’ under discussion, I will cite three precedents which substantiate a distinction of the type proposed here. The first is found in Hyde’s characterisation of ‘Synchronicity I’ and Synchronicity II’, as discussed in chapter 2 of this thesis, in which the former deals with ‘objectively observed events’ and the latter ‘acknowledges the subjective participation of the observing psyche’.⁴⁵ This approximates information retrieval, and dialogue, respectively.

The second precedent is Jung’s own acknowledgement of the existence of two distinct manifestations of synchronicity:

⁴¹ Radin, *Real Magic*, p. 100.

⁴² Dean and Kelly, ‘Is Astrology Relevant to Consciousness and Psi?’, p. 179, citing John Beloff, ‘Mind and Machines: A Radical Dualist Perspective’, *Journal of Consciousness Studies* Vol. 1 No. 1, p. 36. (The quotation here is as per Beloff’s original article, Dean and Kelly had ‘from objects other’ rather than ‘from an object other’.)

⁴³ Curry, ‘Embodiment, Alterity Agency’, pp.114-5.

⁴⁴ Curry, ‘Embodiment, Alterity Agency’ pp. 114-5.

⁴⁵ Hyde, *Jung and Astrology*, p. 128.

with the help of the statistical method, existence of such [synchronistic] effects can be proved, as Rhine and other investigators have done. But the individual nature of the more complex phenomena of this kind forbids the use of the statistical method, since this stands in a complementary relation to synchronicity and necessarily destroys the latter phenomenon, which the statistician is bound to discount as due to chance.⁴⁶

Under this account, synchronicity may be glimpsed – in etiolated form – through statistical analysis yet it is only possible to appreciate its full impact and significance in individual cases. A distinction of this type may also be seen in my third precedent, which is Champion’s description of the range of understandings of the term ‘judicial astrology’: ‘In some versions of judicial astrology, the astrologer is an observer, dispassionately analysing the manifestation of astrological principles in terrestrial affairs. In other versions... the astrologer is psychically embedded in the cosmos and plays a vital part in the application of astrology to human affairs.’⁴⁷

I said in chapter 2 that I would use the terms ‘astrology-as-science’ and ‘astrology-as-divination’ rather than the more traditional terms ‘natural astrology’ and ‘judicial astrology’, despite the considerable overlap between them. The reason for doing so comes into focus in Champion’s description: ‘judicial astrology’ is too broad a term for this enquiry, straddling as it does conceptions of astrology which do, and do not, conform to the information-retrieval model. The epistemological import of this distinction is considerable. A model of ‘divination’ which posits the separate existence of inert information makes it valid to evaluate how accurate an individual was in retrieving that information. If astrology were understood to be divination in Radin’s sense of information-retrieval, therefore, there would be no objection in principle to making tests of astrologers. Again, these would be tests of the kind in which what the astrologer does would be ‘black-boxed’.

If however divination (and therefore astrology-as-divination) is understood as a *dialogue* with more-than-human agents, the provision of information may not be the primary function of the exchange. This can be elucidated through Stephen Karcher’s

⁴⁶ C. G. Jung, Foreword to: Fanny Moser, *Spük: Wahrglaube oder Irrglaube?* (Freiburg: Baden bei Zürich, Gyr-Verlag, 1950) p. 11 This translation from: C. G. Jung, Gerhard Adler (ed.), R. F. C. Hull (tr.), *The Symbolic Life (Collected Works of C. G. Jung Vol. 18)* (London: Routledge and Kegan Paul, 1976) p. 319, para. 761.

⁴⁷ Champion, *Astrology and Popular Religion*, p. 9.

discussion of the underlying philosophy of divination through the *I Ching*. In this approach there is, he wrote, a 'Bright Spirit' (*shen*) which 'can act as an inner voice, a guide and healer. It helps us connect our path to the Way. The symbols of Change give it a way to speak.'⁴⁸ The 'Way' translates *Dao*, which 'is the on-going process of the real, the elusive movement of life, a universal experience or principle not available to rational or dialectical awareness.'⁴⁹ Karcher told me:

whatever Dao is, and it is 'unknowable', it is beyond any of our ideas or beliefs about 'good and evil'. And, to me, the Yi [Ching] is all about 'correcting' our behaviour and thus our experience to bring us back into the flow of whatever Dao is (and is not). This sometimes involves setting us on a path where we will 'not learn something but experience something and be set right'. And like initiation, the 'setting right' can be painful. But whatever Yi is, it cannot be 'kept at a distance' and it cannot be 'confined by rules' - no matter how high-minded or spiritual those rules may be. One of its jobs seems to be to continually keep pulling the rug out from under our feet...⁵⁰

The purpose of divination in this perspective is not simply to convey information – hence Karcher's contention that the *I Ching* 'does not *describe* Change; it *participates in* and *articulates* Change.'⁵¹ From an epistemological perspective, this has the same consequences as have already been noted for what Cornelius has characterised as 'the unique case', introduced in chapter 2. This is an account of what transpires in an astrological reading which does not characterise it in terms of the straightforward acquisition of information, but as an engagement or dialogue. A way of characterising the difference between these two orientations is to say that the latter involves – in William James's sense – intimacy, to which I now turn.

⁴⁸ Stephen Karcher, *Total I Ching: Myths for Change* (London: Time Warner, 2003) p. 65.

⁴⁹ Karcher, *Total I Ching*, p. 13.

⁵⁰ Email from Stephen Karcher to the author, 11th April 2008. Reproduced with permission. The phrase that Karcher quotes – 'not learn something but experience something and be set right' – can be found, with attribution to Aristotle, in *Dio* by Synesius (c. 373 – 414 CE): 'it is like Aristotle's view that men being initiated have not a lesson to learn, but an experience to undergo and a condition into which they must be brought, while they are becoming fit (for revelation).' – Synesius, Augustine Fitzgerald (tr.), *The Essays and Hymns of Synesius of Cyrene: Including the Address to the Emperor Arcadius and the Political Speeches* (Oxford: Oxford University Press, 1930), p.48 (*Dio* vii, 10).

⁵¹ Karcher, *Total I Ching*, p. x. Original emphases.

6.4 The Central Role of Intimacy

William James's discussion of, and emphasis on, intimacy emerged in his discussion of religion. He framed it as one of two orientations toward the world, the foreign and the intimate:

From a pragmatic point of view the difference between living against a background of foreignness and one of intimacy means the difference between a general habit of wariness and one of trust. One might call it a social difference, for after all, the common *socius* of us all is the great universe whose children we are. If materialistic, we must be suspicious of this *socius*, cautious, tense, on guard. If spiritualistic, we may give way, embrace, and keep no ultimate fear.⁵²

Commenting on this passage, Lamberth observed that *socius* 'means an ally, a partner, even a family member with whom one is actively and closely related.'⁵³ The theme of intimacy was prefigured (for James had yet to coin the term itself) in his work *Talks to Teachers and Students*, from 1892, in which James wrote:

Every Jack sees in his own particular Jill charms and perfections to the enchantment of which we stolid onlookers are stone-cold. And which has the superior view of the absolute truth, he or we?... Is he in excess, being in this matter a maniac? Or are we in defect, being victims of a pathological anaesthesia as regards Jill's magical importance? Surely the latter; surely to Jack are the profounder truths revealed; surely poor Jill's palpitating little life-throbs *are* among the wonders of creation, *are* worthy of this sympathetic interest; and it is to our shame that the rest of us cannot feel like Jack.⁵⁴

Richard M. Gale remarked that this 'might be the most profound passage in James'.⁵⁵ It is of particular relevance to the present thesis because it articulates the existence of an affective component in the definition of 'truth', an element which would be innately subjective and therefore beyond the possibility of scientific explanation.

⁵² William James, *A Pluralistic Universe* in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1909]), p.644.

⁵³ David C. Lamberth, *William James and the Metaphysics of Experience* (Cambridge University Press, 1999) p.157.

⁵⁴ William James, 'Talks to Teachers on Psychology, and to Students on Some of Life's Ideals' in: William James, Gerald E. Myers (ed.), *William James: Writings 1878 – 1899* (New York, NY: The Library of America, 1992 [1899]) p.861. Original emphases.

⁵⁵ Richard M. Gale, *The Philosophy of William James: An Introduction* (Cambridge University Press, 2005), pp.178-9.

Darby Costello recounted experiences which are relevant here. In the early days of her astrological practice, she told me, ‘after a chart, I’d sometimes cry for hours. The person I was closest to then said, “You’ve got to stop this, or you’ve got to stop doing charts, this is ridiculous.”’⁵⁶ I asked her what it was that caused her to cry, and she replied: ‘I think it was the impact of other people’s lives. It was the intensity of being so intimate, so fast, with another person, but on an imaginal level... the power of another person’s life, and to be so intimately involved in it.’⁵⁷

In James’s thought, the significance of intimacy emerged particularly in his late work *A Pluralistic Universe*, where it was, in Lamberth’s words, ‘James’s most general criterion for distinguishing good philosophy.’⁵⁸ The breadth of the term’s reach is matched by the complexity of its significance – Lamberth characterised it as ‘a phenomenological affect, a variable, concrete and independent feature of real metaphysical relations, and ultimately... an ideal for human action’.⁵⁹

In defining intimacy, James contrasted it to living as if against ‘a background of foreignness’.⁶⁰ He also used the term ‘providence’ to further characterise a relationship of intimacy, when he invited his audience to consider the differences that followed from believing that ‘the facts of experience up to date are purposeless configurations of blind atoms moving according to eternal laws, or that on the other hand they are due to the providence of God’.⁶¹

My contention – to be developed below – is that an attitude of intimacy is potentially congenial for astrology-as-divination, whilst an attitude of foreignness tends to preclude it from consideration. Thus for instance when Richard Dawkins asserted, ‘The universe we observe has precisely the properties we should expect if there is, at bottom, no design, no purpose... nothing but blind, pitiless indifference’, this showed that he

⁵⁶ Darby Costello, interview, 2005.

⁵⁷ Darby Costello, interview, 2005.

⁵⁸ Lamberth, *William James and the Metaphysics of Experience*, p.156. Cf Levinson’s suggestion that ‘Intimacy was the principle of order in James’s hierarchy of universes from 1904 on.’ Henry Paul Levinson, *The Religious Investigations of William James* (Chapel Hill, NC: University of North Carolina Press, 1981) p. 192.

⁵⁹ David C. Lamberth, ‘Interpreting the universe after a social analogy: Intimacy, panpsychism, and a finite god in a pluralistic universe’ in Ruth Anna Putnam (ed.), *The Cambridge Companion to William James* (Cambridge University Press, 1997) p. 245.

⁶⁰ James, *Pluralistic Universe*, p.644.

⁶¹ James, *Pragmatism*, p. 530.

subscribed more to foreignness than to intimacy in his world-view, which may in turn have predisposed him towards the dismissal of providential manifestations such as astrology-as-divination.⁶² The astrologer Steven Forrest framed a similar dichotomy: ‘The sky is alive. How strange those words sound... But try the alternative: the sky is dead. We inhabit a dead universe. So where’s the truth? Is the cosmos alive or inanimate? Do we live inside a vast thought... or a vast clock?’⁶³ He went on to characterise the recognition of a living sky as ‘the soul of astrology’.⁶⁴

William James contended that, ‘The Universe is no longer a mere It to us, but a thou, if we are religious; and any relation that may be possible from person to person might be possible here.’⁶⁵ This is the type of relationship with the universe that is required for divination as dialogue with the more-than-human, the form upon which I will henceforth focus. This was a central theme in Lindsay Radermacher’s MPhil, in which she discussed the relevance to astrology of two orientations – ‘I-It’ and ‘I-thou’ – as found in Martin Buber’s thought.⁶⁶ These clearly parallel the attitudes of foreignness, and intimacy, respectively, as found in James’s work. I have not been able to find any evidence of Buber being familiar with James’s writings, but as Gale has remarked, James’s ‘analysis of the I-Thou experience bears a striking resemblance to that offered by Martin Buber some thirty years later.’⁶⁷ There is also a close parallel between Brockbank’s treatment of a ‘responsive cosmos’ (discussed in chapter 3), and a universe with which an intimate, dialogical relationship is possible.

William James contended that there are fundamentally two kinds of philosophies, the materialistic and the spiritualistic. Materialistic philosophies ‘define the world so as to leave man’s soul upon it as a sort of outside passenger or alien, while [spiritualistic

⁶² Richard Dawkins, *River out of Eden: A Darwinian View of Life* (New York, NY: Basic/Perseus 1995) p. 133.

⁶³ Steven Forrest, *The Night Speaks: A Meditation on the Astrological Worldview* (San Diego, CA: ACS Publications, 1993) p. 5.

⁶⁴ Forrest (1993) p. 5.

⁶⁵ James, *Will to Believe*, p.476. Another reference to I-thou and I-it occurs at p.557 of the same work.

⁶⁶ Lindsay Radermacher, *The Role of Dialogue in Astrological Divination* (MPhil, University of Kent 2011); available from

<http://www.the9thhouse.org/docs/Lindsay%20Radermacher%20MPhil%20Thesis%202011.pdf> (checked 8th July 2012); Martin Buber, Walter Kaufmann (tr.), *I and Thou: A new translation, with a prologue and notes* (Edinburgh: T & T Clark, 1970 [1923 as *Ich und Du*]) particularly pp.53 -60; and Walter Kaufmann’s prologue to his translation of the text, particularly pp.11-18.

⁶⁷ Richard M. Gale, *The Divided Self of William James* (Cambridge University Press: 1999) p. 246.

philosophy] insists that the intimate and human must surround and underlie the brutal.’⁶⁸ His concern with intimacy therefore led him to focus on spiritualistic philosophies, and here he proposed a distinction between Theism (Dualistic Spiritualism) and Pantheism (Monistic Spiritualism).⁶⁹ In what follows, I will use the terms ‘theism’ and ‘pantheism’ in accordance with James’s definition, which I will elaborate upon in the following section. It is necessary to specify that I follow James’s usage, since the term ‘theism’ is historically ambiguous and has at times had a meaning diametrically opposed to James’s definition. Thiselton described this state of affairs in the seventeenth and eighteenth centuries: “Whereas theists believed in God’s active agency within the world, deism denotes a rationalist concept of God as the Source of Creation who remains above and beyond it, but is not immanent within it.”⁷⁰ This usage is substantially opposed to that of James.

6.5 Theism

Theism, for James, depicts ‘God and his creation as entities distinct from each other, [and so] still leaves the human subject outside the deepest reality in the universe’.⁷¹ This form of religion, he wrote, lacked intimacy: ‘philosophic theism makes us outsiders and keeps us foreigners in relation to God... his connexion with us appears as unilateral and not reciprocal. His action can affect us, but he can never be affected by our reaction.’⁷² The God of theism has been characterised with terms such as ‘absentee landlord’ or ‘*roi fainéant* [do-nothing king]’.⁷³ The only supernatural event in the universe, according to a strict interpretation of theism, would be its creation. Thereafter, everything would unfold according to natural laws. If theism were taken as the explanatory system for astrology, its truth-status would be evaluated by its coherence with natural laws. Insofar as science is the repository of natural laws, the epistemological consequence of theism is that astrology would need to cohere with science in order to be true. The truth-status of astrology, therefore, judged by its

⁶⁸ James, *Pluralistic Universe*, p.640.

⁶⁹ James, *Pluralistic Universe*, pp. 640 – 1.

⁷⁰ Anthony C. Thiselton, ‘Deism’ in *A Concise Encyclopedia of the Philosophy of Religion*, ed. Anthony C. Thiselton (Grand Rapids, MI: Baker Academic, 2002), p.61.

⁷¹ James, *Pluralistic Universe*, p.641.

⁷² James, *Pluralistic Universe*, p.642.

⁷³ For instance in – respectively - William L. Rowe, ‘Immanence’ in Audi, *Cambridge Dictionary of Philosophy*, p.418; W.R. Inge, ‘Theism’ *Philosophy*, Vol. 23, No. 84 (Jan 1948), p. 38. The image of an absentee landowner appears in Matthew 21:33 – 41.

coherence with a theistic universe, would coincide exactly with the truth-status of astrology judged by its coherence with science, as discussed in the previous chapter.

6.6 Pantheism

Pantheism (Monistic Spiritualism) is, for James, ‘the vision of God as the indwelling divine rather than the external creator, and of human life as part and parcel of that deep reality.’⁷⁴ This is a conventional definition, fully concordant (for instance) with that provided by H.P. Owen and repeated by Michael P. Levine, that ‘Although pantheists differ among themselves at many points, they all agree in denying the basic theistic claim that God and the world are ontologically distinct.’⁷⁵

6.6.1 Monistic Pantheism

James applied the criterion of intimacy to pantheism and found it necessary to distinguish ‘two subspecies [of pantheism], of which the one is more monistic, the other more pluralistic in form’.⁷⁶ This yielded a distinction between *Monistic Pantheism* (‘philosophy of the absolute’⁷⁷) and *Pluralistic Pantheism* (‘radical empiricism’⁷⁸)

James characterised monistic pantheism by citing Spinoza’s contention that ‘all things are in God, and so depend on him, that without him they could neither exist nor be conceived...’.⁷⁹ Spinoza’s monistic pantheism was not satisfactory, in James’s view, because of ‘the impossibility of being intimate with *his* God’.⁸⁰ James’s objection was that a monistic account of ‘Absolute Mind’ ‘does not account for our finite consciousness.’⁸¹ The point here is that under a thorough-going monist account, ‘nothing exists but as the Absolute Mind knows it’.⁸² This would deny all reality to human experiences of ‘change... history... novelties, struggles, losses, gains’, with the

⁷⁴ James, *Pluralistic Universe*, p.644.

⁷⁵ H.P. Owen, *Concepts of Deity* (London: MacMillan, 1971) p.65. Quoted in Michael P. Levine, *Pantheism – a non-theistic concept of deity* (London: Routledge, 1994) p.93.

⁷⁶ James, *Pluralistic Universe*, p.644.

⁷⁷ James, *Pluralistic Universe*, p.645.

⁷⁸ James, *Pluralistic Universe*, p.645. Radical empiricism will be discussed in the following chapter.

⁷⁹ Spinoza, ‘The Ethics’, p.74. James quoted this passage in *Some Problems of Philosophy*, p.1043 n2.

⁸⁰ James, *Pluralistic Universe*, p.650. Original emphasis.

⁸¹ James, *Some Problems*, p.1052. The numbering of the four points here follows James’s text.

⁸² James, *Some Problems*, p.1052.

‘Absolute Mind’ disengaged from the vicissitudes of individual human lives.⁸³ Hence, for James, monistic pantheism lacked intimacy and this made it inadequate as an explanatory system for the relationship between the human and the more-than-human. If it were invoked as an explanatory system for astrology similar problems would arise, for horoscopes are read in order to gain insight into human issues – career and relationships for instance – to which monistic pantheism would deny reality and significance. There is therefore nothing in monistic pantheism to explain how astrology could function dialogically.

6.6.2 Pluralistic Pantheism

James’s alternative to monistic pantheism was *pluralistic pantheism*, which ‘admits miracles and providential leadings, and finds no intellectual difficulty in mixing the ideal and the real worlds together by interpolating influences from the ideal region among the forces that causally determine the real world’s details.’⁸⁴

The very concept of pluralistic pantheism involves what can seem to be an incongruous combination of the absolute and the relative, the cosmic and the personal. There is a similarity here with astrology, insofar as astrological interpretation finds personal significance in the positions of cosmic bodies. This parallel will be explored further below, but it is first necessary to consider whether pluralistic pantheism is internally incoherent – for coherence with an incoherent system could carry little epistemological weight.

6.6.2.1 The Incongruity of the Finite God

The possible existence of internal incoherence in James’s thought is perhaps best approached through his discussion of the finite God. This was, for him, an integral part of pluralistic pantheism. Hence his contentions, ‘I believe that the only God worthy of

⁸³ James, *Some Problems*, pp.1052 - 3.

⁸⁴ James, *Varieties of Religious Experience*, pp.520 – 1. I am guilty of terminological anachronism in this paragraph, for in the *Varieties* James used the terms ‘universalistic supernaturalism’ and ‘refined supernaturalism’ for the perspective he subsequently called ‘monistic pantheism’, and ‘piecemeal supernaturalism’ or ‘crass supernaturalism’ for pluralistic pantheism. It seemed best, for clarity’s sake, to use the same terms throughout. For an extended discussion, see: T.L.S. Sprigge, ‘Refined and Crass Supernaturalism’ in Michael McGhee (ed.), *Philosophy, Religion and the Spiritual Life* (Cambridge University Press: 1992), pp.105 – 125; also Nancy Frankenberry, ‘Pantheism’ in J. Wentzel Vrede van Huysteen, *Encyclopedia of Science and Religion* (New York: MacMillan Reference USA, 2003), p.645.

the name *must* be finite...'; 'superhuman consciousness, however vast it may be, has itself an external environment, and consequently is finite.'⁸⁵ For James the finite God was 'the only way to escape from the paradoxes and perplexities that a consistently thought-out monistic universe suffers from'.⁸⁶ Pawelski wrote that 'James's God is... both small enough and large enough to have intimate relationships with human beings', and this is precisely the attraction of a finite God to James: it makes intimacy viable.⁸⁷

The notion of a finite God is not, itself, unusual as Dilley observes:

The ideas of a limited God and the eternity of matter have a very fine lineage, from Plato, through John Stuart Mill, Samuel Alexander, William James, Alfred North Whitehead, Charles Hartshorne, and Edgar Sheffield Brightman, and some scholars think that the notion of a limited God and the eternity of matter are compatible with Biblical tradition as well.⁸⁸

What is unusual in James's account is his simultaneous espousal of pantheism *and* a finite God, hence Barnard's description of the latter as 'a puzzling irritant' and 'an apparent contradiction in terms', and Vanden Burgt's observation that 'one must wonder about its viability'.⁸⁹ To postulate a God who is at one and the same time pantheistic, and finite, seems to attribute mutually contradictory qualities to God, as if one were to speak of a square circle.⁹⁰

The dilemma for James's thought here is very close to a dilemma for astrology when it is considered as a form of divination. Astrology-as-divination presupposes a responsive cosmos, as discussed in chapter 3 of this thesis. James wrote, 'we inhabit an invisible spiritual environment from which help comes, our soul being mysteriously one with a

⁸⁵ James, *Pluralistic Universe*, p.687; p.771. For discussion of James's finite God, see particularly: G. William Barnard, *Exploring Unseen Worlds: William James and the Philosophy of Mysticism* (Albany, NY: State University of New York, 1997), p.251ff, and Lamberth, *William James and the Metaphysics of Experience*, p.196f.

⁸⁶ James, *Pluralistic Universe*, p.771.

⁸⁷ James O. Pawelski, *The Dynamic Individualism of William James* (Albany, NY: State University of New York), p.118.

⁸⁸ Frank B. Dilley, 'A Finite God Reconsidered' in *International Journal for Philosophy of Religion*, Vol. 47, No. 1 (Feb., 2000), p.30.

⁸⁹ Barnard, *Exploring Unseen Worlds*, p.204; Robert J. Vanden Burgt, *The Religious Philosophy of William James* (Chicago: Nelson-Hall, 1981), p.145.

⁹⁰ The use of a square circle as an example of a self-contradictory and inconceivable entity occurs at e.g. P. Coffey, *Epistemology or the Theory of Knowledge: An Introduction to General Metaphysics* Vol. 1 (London: Longmans, Green and Co., 1917) p. 163. James Beilby simply asserted, 'false knowledge is a square circle.' – James Beilby, *Epistemology as Theology: An Evaluation of Alvin Plantinga's Religious Epistemology* (Aldershot: Ashgate, 2005), p. 65.

larger soul whose instruments we are.’⁹¹ This is a close cognate of a responsive cosmos. The form in which astrological ‘help’ is typically presented, however, is in the form of personally meaningful propositions and (in the sense discussed in section 6.4 above) in dialogue, as if one were interacting with a personal, finite, God. The tension that is found between James’s pantheism and his finite God is, therefore, replicated in the concept of astrology-as-divination, and it seems plausible that a resolution of James’s seemingly incompatible modes of divinity will also be relevant to astrology-as-divination. On this basis I will pursue the issue of James’s finite God in the following sub-section.

6.6.2.2 The Finite God: Context and Precedent

A crucial factor to contextualise the finite God of James is the latter’s distrust of ontological absolutes. Thus for example he argued that ‘our science is a drop, our ignorance a sea... this at least is certain – that the world of our present natural knowledge is enveloped in a larger world of some sort of whose residual properties we at present can frame no positive idea.’⁹² Hence, for James, ‘God’ is a useful way of thinking about what is by nature beyond human conceptualisation. This can be seen when he characterised his finite God as ‘the name not of the whole of things, but only of the ideal tendency in things, believed in as a superhuman person who calls us to co-operate in his purposes, and who furthers ours if they are worthy. He works in an external environment, has limits, and has enemies.’⁹³ The phrase, ‘believed in as a superhuman person’ in turn echoes James’s pragmatic argument that ‘if the hypothesis of God works satisfactorily in the widest sense of the word, it is true’; or, again, that ‘God is real since he produces real effects’.⁹⁴ His finite God, therefore, should be seen as a useful way of thinking and not as an ontological absolute. At this point it becomes relevant to consider a parallel in Vedānta.

James was aware of the philosophy of Vedānta both through reading and through meetings with Swami Vivekananda (1863 – 1902).⁹⁵ Although James characterised

⁹¹ James, *Pluralistic Universe*, p. 770.

⁹² James, *The Will to Believe*, p.496.

⁹³ James, *Pluralistic Universe*, p.686.

⁹⁴ James, *Pragmatism*, p.618; James, *Varieties of Religious Experience*, p.517.

⁹⁵ Meetings between the two, and the presence in James’s library of works by Vivekananda, are described in the annotations to: William James, Frederick Burkhardt (ed.), Fredson Bowers (ed.), *The Works of*

Vedānta as ‘The paragon of all monistic systems’, there is a case for considering that it would be more correct to characterise it as nondual rather than monistic. Hence, Barnard argued: ‘These (Eastern religious) traditions are nondual rather than monistic in that they refuse to say that the world is ultimately one, or not one, or both, or neither; instead... they advocate a ruthless apophatic negation of any and all conceptual structures’.⁹⁶ As Barnard also remarked, it is plausible that had he been more clearly aware of it, James would have valued the ‘empirical grounding and metaphysical flexibility’ of Eastern traditions such as Vedānta.⁹⁷ The closeness of fit between James’s religious thought and the Vedic tradition may be seen in the distinction in the latter between two forms of Brahman – *nirguṇa Brahman* and *saguṇa Brahman*, meaning God without, and with, characteristics respectively. *Saguṇa Brahman* provides a close parallel for James’s finite God – a point I will argue after introducing the concept.

Sharma suggested that the distinction between *nirguṇa* and *saguṇa* first appeared in the *Bṛhadāranyaka Upanishad*, around the eighth century BCE.⁹⁸ *Nirguṇa* and *saguṇa Brahman* provide precedents for James’s advocacy of pantheism *and* a finite God. Thus for instance in John Hick’s account:

Nirguna God is the eternal self-existent divine reality, beyond the scope of all human categories, including personality; and Saguna God is God in relation to his creation and with the attributes which express this relationship, such as personality, omnipotence, goodness, love and omniscience. Thus the one ultimate reality is both Nirguna and non-personal, and Saguna and personal, in a duality which is in principle acceptable to human understanding.⁹⁹

If the individual is a participating element in the whole, then what are experienced as dialogical exchanges are possible; in such exchanges, *saguṇa Brahman* is the name given to that which engages and responds. A consequence of *saguṇa Brahman*’s role as mediator was expressed by a recent exponent of the Vedantic tradition, Ramana Maharshi (1879 – 1950) when he said that ‘God assumes any form imagined by the

William James: The Varieties of Religious Experience (Cambridge, MA: Harvard University Press, 1985) pp. 466 – 7 n. 317.32. James’s involvement with Buddhist and Vedantic thought is described in: Eugene Taylor, *William James on Consciousness Beyond the Margin* (Princeton, NJ: Princeton University Press, 1996), pp. 60 – 5.

⁹⁶ James, *Pragmatism*, p. 552; Barnard, *Exploring Unseen Worlds*, p. 239.

⁹⁷ Barnard, *Exploring Unseen Worlds*, p. 239.

⁹⁸ Arvind Sharma, *Classical Hindu Thought: an Introduction* (Oxford University Press, 2000) p.37.

⁹⁹ John Hick, *God and the Universe of Faiths* (2nd ed.) (Oxford: Oneworld, 1993), p.144.

devotee through repeated thinking in prolonged meditation.’¹⁰⁰ There is a parallel here with James’s contention that ‘faith in a fact can help create the fact’.¹⁰¹ A further parallel can be seen in James’s discussion of prayer when he quoted, with approval, his friend F.W.H. Myers:

If we then ask to *whom* we pray, the answer (strangely enough) must be that *that* does not much matter. The prayer is not indeed a purely subjective thing; - it means a real increase in intensity of absorption of spiritual power or grace; - but we do not know enough of what takes place in the spiritual world to know how the prayer operates; - *who* is cognizant of it, or through what channel the grace is given.¹⁰²

Reflecting on this element of James’s thought, Amos Funkenstein summarised it as the principle that ‘we make our God or gods in our image’, and remarked that ‘It is this mechanism, the ways of the self in projecting itself, that was one of James’s most interesting (albeit hardly recognized) contributions to the philosophy of religion’.¹⁰³

A number of further parallels for James’s finite God can be found in other spiritual and philosophical traditions.¹⁰⁴ A parallel with particular relevance is that mentioned by Hick between *saguna Brahman* and providence, specifically as providence is found in the writings of Pseudo-Dionysius (5th or 6th century CE) because this offers a potential link to synchronicity – often cited as an important theoretical basis for astrology, as discussed in chapter 2 of this thesis.¹⁰⁵ Providence is characterised as a way in which the more-than-human relates to the individual human.¹⁰⁶ This can be seen when, for

¹⁰⁰ Arvind Sharma, ‘Predetermination and Free Will in the Teaching of Ramana Maharshi (1879-1950)’ in *Religious Studies*, Vol. 20, No.4 (Dec 1984), p.615; Ramana Maharshi quoted in: Ramana Maharshi, David Godman (ed.), *Be As You Are – The Teachings of Sri Ramana Maharshi* (Arkana, 1985), p.205.

¹⁰¹ James, *The Will to Believe*, p.474.

¹⁰² James, *Varieties of Religious Experience*, p.467.

¹⁰³ Amos Funkenstein, ‘The Polytheism of William James’, *Journal of the History of Ideas Vol.55 No.1* (Jan. 1994), p.111.

¹⁰⁴ For instance, Hick discussed similar distinctions in the Torah, the Quar’an, in Buddhism and in Christianity - John Hick, ‘Ineffability’, *Religious Studies*, Vol. 36, No. 1 (Mar 2000) p.36. There is a similar discussion at: John Hick, *Dialogues in the Philosophy of Religion* (2nd ed.) (Basingstoke: Palgrave MacMillan, 2010 [2001]) pp.132-3. McEvilley remarked a parallel between the Stoic conception of God as both immanent and transcendent, and the Vedic conceptions of *nirguna* and *saguna Brahman* – Thomas McEvilley, *The Shape of Ancient Thought: Comparative Studies in Greek and Indian Philosophies* (New York, NY: Allworth Press, 2002), p. 542.

¹⁰⁵ Hick, ‘Ineffability’, p.39.

¹⁰⁶ A distinction is sometimes made between ‘general providence’, which is embodied in the rules of the universe at its creation – in James’s terms this would belong in a theistic universe – and ‘special providence’, a form whereby God intervenes in the lives of creatures on an ongoing basis. In what follows I am concerned with special providence. For special and general (or ‘particular’) providence *sui generis*:

example, Dionysius wrote of God making truth known ‘by way of representative symbols’, adding, ‘this divine ray [i.e. the light of God] can enlighten us only by being upliftingly concealed in a variety of sacred veils which the Providence of the Father adapts to our nature as human beings.’¹⁰⁷ The overlap in meaning between synchronicity and providence has been discussed by Main – as when, for instance, he suggested that ‘Synchronistic experiences... can easily suggest the operation of providence’.¹⁰⁸ In his analysis, Main implied that providence might have been more of an influence on the formulation of synchronicity than was acknowledged by Jung, given the latter’s ‘efforts to highlight the scientific evidence for his theory’, and to introduce ‘the religious influences on it covertly’.¹⁰⁹

James’s conception of divinity changed during his life. Throughout his philosophical life he was opposed to ideas of an absolute insofar as it fostered an attitude of foreignness, and in consequence for most of his life he was wary of ideas of an absolute per se. When however in 1908, two years before his death, he delivered the lectures that made up *A Pluralistic Universe*, and in which he advocated a finite God, he also acknowledged a change in his view, saying that ‘The absolute is not the impossible thing I once thought it’, and that ‘the absolute is entitled to a patient hearing.’¹¹⁰

A clue to this development in James’s thought is contained in Barnard’s remark that ‘although James claims that his theology in *A Pluralistic Universe* is pantheistic, in actuality, it is closer to being panentheistic.’¹¹¹ (Panentheism being the view that God’s being ‘is more than, and is not exhausted by, the universe’¹¹²). John W. Cooper also

Thomas F. Tracy, ‘Divine Action’ in: Philip L. Quinn, Charles Taliaferro (eds.), *A Companion to Philosophy of Religion* (Malden, MA: Blackwell, 1997), p.300.

¹⁰⁷ Pseudo-Dionysius, *The Celestial Hierarchy* 121B – 121C. This translation from: Pseudo-Dionysius, Colm Lubheid (tr.), *Pseudo-Dionysius: the Complete Works* (Mahwah, NJ: Paulist Press, 1987) p.146.

¹⁰⁸ Roderick Main, *Revelations of Chance: Synchronicity as Spiritual Experience* (Albany, NY: State University of New York, 2007), p. 56.

¹⁰⁹ Main, *Revelations of Chance*, p. 106.

¹¹⁰ James, *Pluralistic Universe*, p. 763.

¹¹¹ Barnard p.203. Original emphasis.

¹¹² ‘Panentheism’ in F. L. Cross and E. A. Livingstone (eds.), *The Oxford Dictionary of the Christian Church* (3rd edn.) (Oxford University Press, 2005), p.1221. This is cited as an authoritative definition by e.g. John W. Cooper, *Panentheism – the Other God of the Philosophers* (Nottingham: Apollos/InterVarsity, 2007), p.27 and Michael W. Brierley, ‘The Potential of Panentheism for Dialogue Between Science and Religion’ in Philip Clayton (ed.), *The Oxford Handbook of Religion and Science* (Oxford University Press, 2006), p.637.)

identified James as a panentheist.¹¹³ This identification is, I believe, a valid one although it can be considered to duplicate the distinction that James himself made when he professed his advocacy of *pluralistic* pantheism. Pluralism brings agency to individual elements within the absolute, thereby liberating God from a merely static role:

We are indeed internal parts of God and not external creations... Yet because God is not the absolute, but is himself a part when the system is conceived pluralistically, his functions can be taken as not wholly dissimilar to those of the other smaller parts, - as similar to our functions consequently.¹¹⁴

In order to formulate a God who would subsume all of existence and yet retain the capacity for involvement as if a finite being, it is necessary to take the panentheistic step of defining God as not simply the sum total of all existence, but also in some way beyond it. The specific relevance of pluralism to astrology-as-divination lies in the potential it offers for seemingly-disparate elements of the cosmos such as human beings and stars to engage and re-engage. This follows as a possibility from James's assertion that 'if *a* is once out of sight of *b* or out of touch with it... then, according to monism, it must always remain so, they can never get together; whereas pluralism admits that on another occasion they may work together, or in some way be connected again.'¹¹⁵ Such connections are the basis for James's desideratum of intimacy.

6.7 Consequences of Intimacy for Astrology

A consequence of the involvement of intimacy between astrologer and the more-than-human is that tests of astrology which look for objective correlations between horoscopic factors and their manifestations in the world would not be applicable, to the extent that astrology is seen as a form of divination. Such tests, and the world-view that often informs them, exclude by design the intimacy which is, in this view, an integral part of astrology-as-divination. This is a position which has been put forward by some astrologers – for example, Adrian Duncan:

Astrology ascribes meaning to planetary events and assumes that the energy that moves the universe has a kind of inherent intelligence. The astrologer maintains that there is a natural

¹¹³ Cooper, *Panentheism*, p. 141.

¹¹⁴ James, *Pluralistic Universe*, pp. 774 – 5.

¹¹⁵ James, *Pluralistic Universe*, p. 777.

resonance between the evolving motion of the universe and the development of the human soul. This is a very effective working hypothesis, and the astrologer who puts doubt about its effectiveness aside and embraces the hypothesis wholeheartedly is rewarded by this intelligent universe. The clinical and objective approach of the skeptic will lead to very poor results in the interpretation process, while the enthusiastic believer will become engaged in dialogue with a supportive universe, magically geared to his or her development.¹¹⁶

In this chapter I have discussed what Duncan characterised as a ‘supportive universe’ by particular reference to William James’s term, intimacy. Two consequences of intimacy for astrology can be brought out and emphasised now.

The first is a consequence for astrological technique. If astrology is to be beyond the evaluatory range of science, it cannot work in a mechanical way, where horoscopic factor (x) would always correspond to interpretation (y). The element of intimacy needs to extend, not only to the existence of interaction between human and more-than-human, but also to flexibility and context-dependency in the interpretation of astrological symbolism. That this is the case has been argued by some astrologers. For instance, Alexander Ruperti (1913 – 98) commented that ‘most astrologers seem to think that there is an astrology with a capital A which exists somewhere, has always existed, and which we should all submit ourselves or be faithful to’¹¹⁷ His perspective, though, was that ‘All that exists are astrologers, that is, people who try to interpret the relationship they have with the universe, through astrological symbols. Each astrologer has his system, his way of looking at it, that’s why there are so many schools [of astrology]...’¹¹⁸ Similarly, in discussing horary astrology, Marc Edmund Jones (1888 – 1980) wrote that ‘Every good practitioner makes modifications in the techniques according to his own tastes, because his private universe of thought has its own specialized way of ordering things.’¹¹⁹

Up to this point however the relevance of scientific tests has not been precluded. Tests could be made in which (as discussed above) astrology was black-boxed and astrologers

¹¹⁶ Adrian Duncan, *Astrology: Transformation and Empowerment* (Boston, MA: Weiser, 2002) pp. 13 – 14.

¹¹⁷ Alexander Ruperti, ‘Meaning of Humanistic Astrology’ (Lecture at 1st European Astrological Congress, Prague 1994), www.cosmocritic.com/pdfs/Ruperti_Alexander_Meaning_of_Humanistic_Astrology.pdf (checked 27th August 2019) p. 5.

¹¹⁸ Ruperti, ‘Meaning of Humanistic Astrology’, p. 5.

¹¹⁹ Marc Edmund Jones, *Horary Astrology* (2nd Edn.) (Shambhala, Berkeley CA, 1971 [1943]) p.58.

asked to read charts on whatever basis they would normally follow. The validity of such an approach is called into question only if the ascription of significance from a horoscopic reading is considered also to be context-dependent. This possibility was described by Maggie Hyde:

A chart might be adequately interpreted along the lines of traditional astrology, with its symbolism clearly located in the 'facts' of the client's life. It might show the astrologer-client relationship. It might turn out to have nothing much to do with the astrologer. Or the client. We cannot presuppose how the chart will read.¹²⁰

This can be seen as a consequence of intimacy: the astrologer is intimately involved in the process of consulting the more-than-human, which has agency; hence, the response may reflect and comment upon some facet of the situation other than that which the astrologer, or the client, intended to be the focus of the horoscopic reading. This type of phenomenon has also been remarked on in the context of *I Ching* divination – an example being Furnald-Smith's observation that 'Questions asked with hostile intent tend to receive nonsensical answers.'¹²¹ A parallel statement from an astrologer is Anthony Louis's assertion that 'Silly questions will produce trivial charts with contradictory or confusing indications. The more sincere and meaningful the question, the more precisely the astrological symbolism will fit. Such charts give the astrologer an uncanny feeling and a sense of awe at the concordance between the universe and the mind of man.'¹²² The sense of awe to which Louis refers will receive further discussion in section 6.10.2.

An illustration of the context-dependent character of divination that is mooted here may be found in an experience Michael Fordham had when consulting the *I Ching*. He consulted the oracle twice on the same question, in the expectation of receiving confirmation; instead, on the second occasion he received the hexagram *Mêng* which reads – in part – 'If he asks two or three times, it is importunity/If he importunes, I give

¹²⁰ Hyde, *Jung and Astrology*, pp. 196 - 7.

¹²¹ Richard Furnald Smith, *Prelude to Science: An Exploration of Magic and Divination* (New York, NY: Charles Scribner's Sons, 1975) p. 32.

¹²² Anthony Louis, *Horary Astrology: The History and Practice of Astro-Divination* (St. Paul, MN: Llewellyn, 1991) p. 409.

him no information.’¹²³ In a letter to Fordham, Jung remarked that in this episode the *I Ching* was ‘calling him to order’, adding that he had a similar experience which ‘gave me a wholesome shock and at the same time... opened wholly new vistas to me.’¹²⁴

If astrology is understood to interact with those who consult it in this way, rather than simply providing information, the truth-status of each horoscopic reading would be inextricably bound up with the subjectivity of the astrologer and/or client, and an apparently nonsensical reading might be relevant and appropriate to the situation. The evaluation of the relevance and appropriateness of a reading would then belong primarily to the subjectivity of the individual(s) concerned, and this would put the truth-status of astrology-as-divination altogether beyond the scope of scientific testing. This is the ‘unique case’ as defined by Cornelius, introduced in chapter 1 and discussed in detail in chapter 2 of this thesis.¹²⁵ At this point, therefore, an explanatory system has been teased out which would establish the question of astrology-as-divination’s truth-status as one that could only be evaluated by the individual for her- or himself.

6.8 Recapitulation

This chapter began with an investigation into what consequences might follow for astrology, and the evaluation of its truth-status, if the mind were permitted an active role in astrological work. Three possible understandings of ‘intuition’ were used to explicate the possible consequences. It emerged that the only way in which astrology would move altogether beyond the analytical competence of scientific testing would be if Jamesian *intimacy* (or something like it) were involved as an integral element. The position thus arrived at is, I have argued, astrology-as-divination properly understood.

In the remainder of this chapter I will offer an extended procatleipsis for the account that is emerging; specifically, I will raise questions as to whether astrology-as-divination is internally coherent. For it is possible that astrology has itself been jettisoned in reaching this point in the discussion. In order to elucidate and consider

¹²³ Michael Fordham, *New Developments in Analytical Psychology* (London: Routledge & Kegan Paul, 1957) p. 49. The translation is from: Richard Wilhelm (tr.) and Cary Baynes (tr.), *The I Ching or Book of Changes* (3rd edn.) (London: Routledge & Kegan Paul, 1968 [1951]) pp. 20 – 21, hexagram 4.

¹²⁴ C. G. Jung, letter to Michael Fordham, 3 January 1957 in: C. G. Jung; Gerhard Adler, Aniela Jaffé (eds.); R. F. C. Hull (tr.), *C. G. Jung: Letters* (Vol. 2) (London: Routledge & Kegan Paul, 1976), pp. 343 – 4 (quotation at p. 344).

¹²⁵ Cornelius, *Moment of Astrology*, pp.186-7.

that point I will – in sections 6.9 and 6.10 below – pursue two particular issues for this formulation of astrology; the ensuing discussion will also serve to add more detail to the characterisation of astrology-as-divination.

6.9 Intimacy and the Problem of Planets

In chapter 1 I said that I would use Curry’s definition of astrology, ‘the practice of relating the heavenly bodies to lives and events on earth, and the tradition that has thus been generated’.¹²⁶ Some commentators have argued, in regard to both psi and divination, that they each – if taken as an explanatory system for astrology – bypass the heavenly bodies and therefore bypass horoscopic work. Thus for example Ertel, at the conclusion of a discussion of tests of astrologers, remarked, ‘Confirmations of classical astrological predictions... do not verify astrological beliefs. Correct astrological diagnoses, if they occur, might be due, e.g., to paranormal intuitions of psi-gifted astrologers. Parapsychological phenomena are likely to eventually become reconcilable with the growing body of scientific knowledge; astrology is far from having the same chance.’¹²⁷

This charge – that when astrology works it has nothing to do with astrological methodology – was also made, as seen in chapter 4, by Augustine when he attributed the functioning of astrology to ‘spirits of evil’.¹²⁸ It is possible that a similar implication lay behind William Lilly’s account of the astrologer Simon Forman (1552 – 1611): ‘some of his astrological judgments did fail... I shall repeat some other of his judgments, which did not fail, being performed by conference with spirits.’¹²⁹

The issue here is that if psi (or conference with spirits) functions without the involvement of astrology, there would seem no reason to believe that psi which occurs in an astrological setting is significantly different. Astrology, then, would be at most a set of techniques to establish a mental state conducive to psi. This was argued by Dean and Kelly in a discussion of Cornelius’s divinatory astrology: ‘In this “all in the mind”

¹²⁶ Curry, ‘Astrology’ in Boyd (ed.), *Encyclopaedia of Historians*, p.55.

¹²⁷ Ertel, ‘Appraisal of Shawn Carlson’, p. 134.

¹²⁸ Augustine, *City of God*, p. 188 (V. 7)

¹²⁹ William Lilly, *William Lilly’s History of His Life and Times, from the year 1602 to 1681* (London: Charles Baldwyn, 1715 [1681]) p. 38. It seems likely that the pious Lilly would have looked askance at Forman’s approach, given that at p. 42 of the same text he quoted Forman: ‘This I made the devil write with his own hand’.

view of astrology there is nothing actually “out there” that involves planets. Instead what matters is the mental state of the astrologer. The technique used for reading the chart is then merely a ritual that leads to the right mental state.’¹³⁰

The phrase ‘all in the mind’ is Dean and Kelly’s understanding of Cornelius’s approach, not a way in which Cornelius has described divinatory astrology. It serves however to elucidate the issue under discussion. If astrology worked only through psi, and if psi were defined as a purely mental phenomenon, then no role would remain to be fulfilled by the physical heavenly bodies. In explaining astrology, then, psi would also render it redundant.

If astrology-as-divination is to withstand this critique, and constitute a viable explanatory system, two ontological elements are needed. Firstly, there would need to be an alternative to the dualistic view that mind and materiality are entirely separate, in a form that would permit meaningful relationship between material objects such as planets, and the mind of the diviner. This relationship could not however be physical causation, for then the explanatory system would be scientific. Secondly, there would need to be an explanation for how planets could hold divinatory significance, when divination typically involves ‘an act of... randomization’ such as throwing yarrow stalks or coins to consult the I Ching, and the movement of the planets is not at all random.¹³¹

The resolution of these issues is implicit in several concepts that have already been discussed, most particularly pluralistic pantheism. I will nonetheless address the issues explicitly here for two reasons: it will make clear the ontological requirements of astrology-as-divination; and, it will enable me to show how concepts that address both issues are found in William James’s philosophy, and that in both cases these concepts can be seen as applications of his guiding principle of intimacy.

6.9.1 James’s ‘Pure Experience’

William James defined dualism by saying that “Thoughts” and “things” are names for two sorts of object, which common sense will always find contrasted and will always

¹³⁰ Dean and Kelly, ‘Is Astrology Relevant to Consciousness and Psi?’, p. 177.

¹³¹ Curry, ‘Embodiment, Alterity and Agency’, p.115. The quotation was given more fully in chapter 1 of this thesis.

practically oppose to each other.’¹³² He regarded it as a problem to be overcome, and proposed ‘pure experience’ as a corrective:

My thesis is that if we start with the supposition that there is only one primal stuff or material in the world, a stuff of which everything is composed, and if we call that stuff ‘pure experience’, then knowing can easily be explained as a particular sort of relation towards one another into which portions of pure experience may enter. The relation itself is a part of pure experience; one of its ‘terms’ becomes the subject or bearer of the knowledge, the knower, the other becomes the object known.¹³³

In James’s philosophy, therefore – as Lamberth puts it – ‘Faced with the question of how epistemologically to bridge the metaphysical gap, James responds, “What makes you think that there is a gap?”’¹³⁴ Rather than a gap, James offered a ‘reconciliation between mind and matter’ as Barnard put it.¹³⁵

A parallel exists here between astrology-as-divination and Jung’s theory of synchronicity, in that both involve connivance between the mental and the physical that would be impossible if mind/body dualism was absolute. Jung found himself compelled by his experience to postulate a non-dualistic position close to James’s ‘pure experience’; as David Tresan remarked, ‘James’ conception [of pure experience] is not far from Jung’s implicit contentions.’¹³⁶ This can be seen – for instance – in Jung’s assertion that ‘If we give due consideration to the facts of parapsychology, then the hypothesis of the psychic aspect must be extended... to matter in general. In that case all reality would be grounded on an as yet unknown substrate possessing material and... psychic qualities.’¹³⁷ The name he adopted for the reality which comprised both mentality and materiality was ‘*unus mundus*’: ‘The common background of microphysics and depth-psychology is as much physical as psychic and therefore

¹³² William James, ‘Does “Consciousness” Exist?’ in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1904]) p. 1141.

¹³³ James, ‘Does “Consciousness” Exist?’, p.1142.

¹³⁴ Lamberth, *William James Metaphysics of Experience*, p.25. Lamberth here puts words into James’s mouth, it is not a direct quotation.

¹³⁵ Barnard, *Exploring Unseen Worlds*, p.28.

¹³⁶ David Tresan, ‘A meditation on death: “Cast a cold eye”’, in: Thomas Kirsch, Virginia Beane Rutter and Thomas Singer (eds.), *Initiation: The Living Reality of an Archetype* (Hove: Routledge, 2007) p. 178.

¹³⁷ Jung, *Flying Saucers: a Modern Myth*, p. 411 (para 780).

neither, but rather a third thing... The background of our empirical world thus appears to be in fact a *unus mundus*.¹³⁸

In order for horoscopic bodies to hold potential relevance to individual minds and lives, and therefore for astrology-as-divination to be viable, a non-dualistic schema of the sort propounded by James and Jung is a prerequisite. In summarising ‘pure experience’, Wilshire also began to draw out its consequences for the understanding of truth:

There is no ‘mind,’ and no ‘external world.’ Pure experience in its various articulations constitutes the world as we know it. So he must say that truth cannot correspond to something ‘out there,’ but is the fruitful leadings and workings of experience within the domain of the experienceable. *Truth is no mere subjective happening in our minds, but is comprised of those fruitful leadings and workings that hold the experienceable world together*—the only world we can know.¹³⁹

In chapter 4 of this thesis I cited Mermin’s remark on ‘the truly spectacular degree to which compelling evidence in support of astrology would require a massive radical reconstruction of our current understanding of the world.’¹⁴⁰ I take it that the challenge posed, by pure experience, to a common-sense view of mind and matter would fall under this description.¹⁴¹ In the following section it will emerge that – under the account of astrology-as-divination put forward here – this radical reconstruction of an individual’s understanding of the world would be evidence to support astrology’s truth-status.

6.10 Personal Religion, Mysticism and Knowledge

The next challenge to the internal coherence of astrology-as-divination is derived from the knowledge-content of mystical experience in James’s philosophy. In the first lecture of his *Varieties*, James announced his intention to ‘ignore the institutional

¹³⁸ C. G. Jung, *Mysterium Coniunctionis: An Inquiry into the Separation and Synthesis of Psychic Opposites in Alchemy* in: C. G. Jung, R. F. C. Hull (tr.), *Mysterium Coniunctionis: The Collected Works of C. G. Jung Volume 14* (2nd edn.) (Princeton, NJ: 1970), p. 538. #to here#

¹³⁹ Bruce Wilshire, *The Primal Roots of American Philosophy – Pragmatism, Phenomenology, and Native American Thought* (Pennsylvania State University Press, 2000) p.7. Original emphasis.

¹⁴⁰ Mermin, ‘Abandoning Preconceptions’, p.642.

¹⁴¹ For my attribution of ‘common-sense’: ‘The traditional view of matter is that it has no “mental pole”, making it difficult to understand its relationship with mind. This view of matter, which derives from classical physics, has become part of the common-sense view of matter, so much so that we might call it “folk physics”.’ – Paavo T. I. Pytkäinen, *Mind, Matter and the Implicate Order* (Berlin: Springer, 2007) p. 203.

branch [of religion] entirely... to consider as little as possible the systematic theology and the ideas about the gods themselves, and to confine myself as far as I can to personal religion pure and simple.’¹⁴² He went on to define ‘personal religion’ as: ‘*the feelings, acts, and experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine.*’¹⁴³ A closely-related term is ‘mysticism’; James wrote that ‘personal religious experience has its root and centre in mystical states of consciousness’.¹⁴⁴

In sub-section 6.6.1 above I discussed the issue that, under monistic pantheism, the more-than-human would take no account of the vicissitudes and ephemera of individual human lives. Since astrology is – to reiterate Curry’s definition – ‘the practice of relating the heavenly bodies to lives and events on earth...’, this is a significant issue for an account of astrology-as-divination as a source of truthful statements.¹⁴⁵ At that point the issue was addressed through the introduction of James’s pluralistic pantheism and a finite God with a providential orientation toward the concerns and expectations of individual beings. A parallel issue emerges however when the focus falls on the nature of the knowledge that would be acquired by the individual human engaged in astrology, for so long as astrology is modelled on James’s personal religion, and is therefore (somehow) involved with mysticism. An explicit assertion of such a position can be found, for instance, in Robert Hand’s statement that ‘astrology is applied mysticism’, where mysticism is ‘the understanding that beneath the apparent diversity of the universe and despite the seeming alienation of all beings from each other and nature, it is all One.’¹⁴⁶

The relevance of mysticism and astrology to one another may be explored by considering James’s definition of mystical experience as having four characteristics: ineffability, noetic quality, transiency and passivity.¹⁴⁷ He wrote that the presence of the first two qualities ‘entitle any state to be called mystical, in the sense in which I use

¹⁴² James, *Varieties of Religious Experience*, p.29.

¹⁴³ James, *Varieties of Religious Experience*, p.31. Original emphasis.

¹⁴⁴ James, *Varieties of Religious Experience*, p. 379.

¹⁴⁵ Curry, ‘Astrology’ in Boyd (ed.), *Encyclopaedia of Historians*, p.55.

¹⁴⁶ Robert Hand, ‘Foreword’ in Olivia Barclay, *Horary Astrology Rediscovered: A Study in Classical Astrology* (West Chester, PA: Whitford Press, 1990) p. 17; pp. 17 – 18.

¹⁴⁷ James, *Varieties of Religious Experience*, pp. 380 – 1.

the word’ and it is upon these that I will focus, for this locates the dilemma for astrology and a closely parallel dilemma for James’s thought.¹⁴⁸

Ineffability means that mystical experience ‘defies expression... no adequate report of its contents can be given in words. It follows from this that its quality must be directly experienced; it cannot be imparted or transferred to others.’¹⁴⁹

Noetic quality means that mystical experiences are ‘states of knowledge... states of insight into depths of truth unplumbed by the discursive intellect.’¹⁵⁰ The awkwardness inherent in juxtaposing these two characteristics was identified by Bernard McGinn:

James, at least here, does not really provide an adequate epistemological analysis of the relation of perceptual and conceptual knowing to buttress this crucial part of his account. In what sense can both kinds of knowing be considered activities of the intellect, or is perceptual knowing only a particular kind of feeling? James’s *Varieties* does not give us immediate answers to these questions.¹⁵¹

The distinction between two kinds of knowing – ‘perceptual’ and ‘conceptual’ in McGinn’s terms – is often met with in epistemological discussion, as was shown in chapter 3 of this thesis. In James’s terminology, they are ‘knowledge of acquaintance’ and ‘knowledge about’ respectively.¹⁵²

The apparent contradiction identified by McGinn in James’s definition of mysticism can be brought into focus by applying it in astrology-as-divination. Since ineffability is a defining characteristic of mystical experience, in James’s words, ‘its quality must be directly experienced; it cannot be imparted or transferred to others.’¹⁵³ This would preclude all knowledge which can be adequately conveyed in a proposition – such as informing a person that their lost keys are in the conservatory, or that they are uncomfortable with emotional displays – and this is the type of knowledge concerning ‘lives and events on earth’ which astrology is generally considered to provide.¹⁵⁴ One

¹⁴⁸ James, *Varieties of Religious Experience*, 381

¹⁴⁹ James, *Varieties of Religious Experience*, p. 380.

¹⁵⁰ James, *Varieties of Religious Experience*, p. 380.

¹⁵¹ Bernard McGinn, *The Foundations of Mysticism: Origins to the Fifth Century* (New York: Crossroad, 1991) p. 292.

¹⁵² James, ‘Function of Cognition’, p. 43 (and *passim*).

¹⁵³ James, *Varieties of Religious Experience*, p. 380.

¹⁵⁴ The quotation refers back to Curry’s previously-cited definition of astrology: Curry, ‘Astrology’ in Boyd (ed.), *Encyclopaedia of Historians* p.55.

consequence of this is that, whatever an astrologer might say to a client, it would not convey the direct, experiential knowledge arrived at by the astrologer. This is a problem for any account of astrological truth as purely ‘knowledge of acquaintance’ or ‘revelatory truth’, which I raised in chapter 4 during my discussion of Brockbank’s thesis.

6.10.1 Concatenated Knowledge in Divinatory Experience

I suggest that in order to resolve this dilemma it is necessary to postulate that in divinatory astrology the two kinds of knowing – ‘perceptual’ and ‘conceptual’ in McGinn’s terms, ‘knowledge of acquaintance’ and ‘knowledge about’ in James’s thought – are concatenated.¹⁵⁵ To elaborate: suppose that a particular horoscopic reading yields knowledge which is factually accurate, or otherwise significantly relevant (‘significantly relevant’ in the sense discussed in section 6.7 above, as in – for instance – the case of Fordham’s *I Ching* readings). This is ‘knowledge about’ – for example, knowledge about the whereabouts of one’s lost keys, or knowing that one has asked a wrong question. The provenance of this knowledge is taken to be the more-than-human. Consequent upon this, there is a sense of awe and amazement that what may have seemed a part of one’s individual, isolated, life is somehow known, commented upon and communicated by the more-than-human. Hence there arises a sense of what James calls intimacy between the individual human subject and the more-than-human. This is a form of personal religious, or mystical, knowledge; in James’s analysis it would be ‘knowledge of acquaintance’ – the ‘acquaintance’ in this case being direct, non-conceptual acquaintance with the more-than-human. This is concatenated, in the literal sense of ‘chained together’, with the initial knowledge – without the information about lost keys, the subsequent personal religious experience would not arise.

This analysis can be seen as an interpretation and development, in an epistemological context, of some of Cornelius’s comments regarding astrology-as-divination. For instance, he wrote of ‘realised interpretation’, that ‘As with synchronicity there appears to be some emotional affect attending realisation of the symbol’.¹⁵⁶ The key parallel here is Cornelius’s account of what are – I suggest – two types of knowledge: the

¹⁵⁵ McGinn, *Foundations of Mysticism*, p. 292; James, ‘Function of Cognition’, p. 43.

¹⁵⁶ Cornelius, *Moment of Astrology*, p. 293.

specific knowledge of that to which some horoscopic symbolism refers; and, knowledge (affective, non-verbal) of surprising intimacy with the more-than-human. I further suggest that, in a divinatory context, the two types of knowledge are concatenated in the sense that without the quotidian truth (such as the whereabouts of lost keys), the sense of awe at the nearness of the more-than-human would not arise. The concatenated relationship between two kinds of knowledge was captured by Curry: ‘Most practising astrologers know the truth of the poet Michael Longley’s observation that “when you capture something with precision, you also release its mysterious aura. You don’t get the mystery without the precision”.’¹⁵⁷

The account being developed here of two kinds of knowledge concatenated in divinatory truth has a parallel in Main’s account of synchronicity. He discussed the impact of a series of symbolically-significant experiences upon the wool merchant and Jungian Edward Thornton, which Thornton understood to be examples of synchronicity.¹⁵⁸ The experiences, Main argued, were associated with a sense of numinosity, of ‘minor miracle’ and of being ‘revelatory’.¹⁵⁹ Finally – and I suggest that this is the most fundamental and relevant point for the present discussion – these experiences of synchronicity

had a profound unifying effect on the whole field of Thornton’s experiences. The very fact that an intimate noncausal connection can be experienced between the outer physical world and one’s inner subjectivity implies that the separateness usually experienced between inner and outer, psychic and physical, or self and world can to a significant degree be dissolved.¹⁶⁰

This is consonant, at points at least, with some accounts of astrological work. For example, the astrologer Lynn Bell said that in astrological consultations, ‘The space that opens between me and the other person allows this larger self to be present and within the presence of the larger self is something larger than “you and I”, or “us and

¹⁵⁷ Patrick Curry in: Willis and Curry, *Astrology Science Culture*, p. 98, citing: Michael Longley, Eileen Battersby (interviewer), ‘An Outsider Searching for His Home: Eileen Battersby talks to Michael Longley’, *The Irish Times*, 11th January 1992, p. 5.

¹⁵⁸ Main, *Revelations of Chance*, pp.63 – 79. Main’s source is: Edward Thornton, *The Diary of a Mystic* (London: George Allen and Unwin, 1967).

¹⁵⁹ Main, *Revelations of Chance*, p.74.

¹⁶⁰ Main, *Revelations of Chance*, p.75.

them”’.¹⁶¹ There is, then, ‘a flow of energy and a heightened perception, a heightened awareness, an exchange with another person that is of a very different nature than anything I do in my life.’¹⁶²

In Thornton’s experiences there were two kinds of truth: a more or less quotidian fact, and arising upon that, an affective, incommunicable sense of separateness dissolving. Main reflected:

Even if it is only a question of the synchronicity seeming to further some short-term and relatively unimportant interest... the experiencer may nonetheless be led by this to infer that a similar kind of benevolent ordering could also be operating more widely and in more important matters.¹⁶³

My contention is that in order for astrology-as-divination to be beyond the epistemological reach of science, there would need to be a relationship between two forms of knowledge, as found in Main’s account of Thornton’s experiences. This would be a relationship between the specific information derived from a horoscope (knowledge about), and a different, primarily affective, form of knowledge (knowledge of acquaintance). If an individual were to try to put words to the latter, they might say something to the effect that – borrowing James’s words – there are ‘but accidental fences’ keeping the individual consciousness from the ‘mother-sea’ of ‘cosmic consciousness’.¹⁶⁴

A remark from Mansfield illustrates the concatenation of kinds of knowledge in astrology:

it can be a moment of great spiritual uplift to have any experience of the indivisible and infinite aspect of soul within which we continuously live. To experience how, for example, a sense of limitation correlates with a Saturn transit, is to glimpse at evidence of our indivisible nature, to get a little peek beyond our finite and limited selves.¹⁶⁵

¹⁶¹ Lynn Bell, quotations from interview in: Darrelyn Gunzburg, ‘The Horoscopic Place: The Encounter between Astrologer and Client’, *Journal for the Study of Religion, Nature and Culture*, Vol. 13 No. 1, March 2019, p. 52.

¹⁶² Lynn Bell quoted in: Gunzburg, ‘The Horoscopic Place’, p. 49.

¹⁶³ Main, *Revelations of Chance*, p.57.

¹⁶⁴ James, ‘Confidences of a Psychical Researcher’, pp.1263-4.

¹⁶⁵ Victor Mansfield, *Head and Heart: A Personal Exploration of Science and the Sacred* (Wheaton, IL: Quest Books, 2002), p.159.

In proposing a concatenated relationship between two forms of knowledge I draw on Barnard's proposal that, in order to address the apparent contradiction between the two forms of knowledge in James's account of mysticism, there is a need for 'a dialectical relationship between experience and interpretation.'¹⁶⁶ Barnard's example was of a yogi meditating on the form of Kālī and attaining a mystical experience. The mystical experience in itself would be 'knowledge of acquaintance'. However,

this mystical experience also possessed important elements of knowledge-about. For instance, knowledge-about was present in the cultural constructs that helped to create a visionary form of Kālī instead of Jesus or Muhammad... However, when the visionary form of Kālī disappeared, and the yogi's experience shifted to a non-dual state of oneness, it could be theorized that the 'percentage' of knowledge-about that was previously present during the yogi's mystical experience was significantly lowered.¹⁶⁷

What I am proposing follows Barnard's general principle, albeit with different content: in the case of astrology, the 'knowledge about' would be propositional information derived from a horoscope, and the 'knowledge of acquaintance' would be an experience of intimacy with the more-than-human. The former conditions the latter, which may strike the individual as belonging to a different order of truth than information concerning the whereabouts of lost keys and all the other matters, essentially mundane in nature, which are the overt subjects of astrological judgements. I prefer the term 'concatenated', rather than Barnard's 'dialectical', for this discussion because the latter could be taken to imply a potential for synthesis between the two forms of knowledge, and that does not seem to be a meaningful possibility here.¹⁶⁸ The term 'entangled' could fit well, but given the possibility for confusion with quantum entanglement it seemed best to avoid it.

6.10.2 *The Mysterium Tremendum*

Radermacher argued that in the discovery of the significance of astrological symbolism, 'Its showing, its appearance to the astrologer can have the full numinous impact of Otto's *mysterium, tremendum* and *fascinans*.'¹⁶⁹ This builds, significantly, on

¹⁶⁶ Barnard, *Exploring Unseen Worlds*, p. 118.

¹⁶⁷ Barnard, *Exploring Unseen Worlds*, p. 118.

¹⁶⁸ The reference to Barnard is to: Barnard, *Exploring Unseen Worlds*, p. 118, quoted above.

¹⁶⁹ Radermacher, *Role of Dialogue*, p. 60.

Cornelius's description of 'emotion' arising when astrology is seen to work.¹⁷⁰

Radermacher has argued for the *mysterium tremendum* as a crucial concept for a phenomenology of astrological experience, predicated on the assumption that astrology is a form of divination.

In the analysis of Rudolf Otto (1869 – 1937), the 'real innermost core' of religion is dubbed 'the numinous'.¹⁷¹ '*Mysterium tremendum* is the term he proposed for the experience that results when the individual mind perceives the numinous.¹⁷² This is an affective form of knowledge, for the numinous 'can only be suggested by means of the special way in which it is reflected in the mind in terms of feeling.'¹⁷³ It is beyond conceptual knowledge, for it means to feel oneself 'In the presence of that which is a mystery inexpressible and above all creatures.'¹⁷⁴

Otto's work was influenced by the examples and discussion in James's *The Varieties of Religious Experience*, and Otto's analysis corresponds to that of James in all the ways significant for the present epistemological discussion.¹⁷⁵ In the first place, the provenance of religious experience is defined as beyond the conceptual power of the human mind. In addition, James's discussion of intimacy is mirrored by Otto's account of contact with the numinous: 'what in all religion is surely the most tender and living moment, the actual discovery of and encounter with very deity.'¹⁷⁶

It is necessary to mark the variation in the focus of the experience, and its strength. Concerning the former, Otto remarked that the *mysterium* 'is in one of its aspects the element of daunting "awfulness" and "majesty"... but... it has at the same time another aspect, in which it shows itself as something uniquely attractive and fascinating' (hence the term is sometimes extended to *mysterium, tremendum* and *fascinans*).¹⁷⁷

¹⁷⁰ Cornelius, *Moment of Astrology* p. 293 (previously cited at sub-section 6.10.1 above).

¹⁷¹ Rudolf Otto, John W. Harvey (tr.), *The Idea of the Holy: An Inquiry into the non-rational factor in the idea of the divine and its relation to the rational* (Oxford University Press, 1923) p. 7.

¹⁷² Otto, *Idea of the Holy*, p. 12.

¹⁷³ Otto, *Idea of the Holy*, p. 12.

¹⁷⁴ Otto, *Idea of the Holy*, p. 13.

¹⁷⁵ Otto cited James's *Varieties* at: *Idea of the Holy*, p. 10n, p. 37-8, p. 53n. The compatibility of Otto's and James's thought was remarked by Rappaport: 'Rudolph Otto's account of the numinous differs from but is compatible with that of James's religious experience.' – Michael Rappaport, *Ritual and Religion in the Making of Humanity* (Cambridge University Press: 1999) p. 377.

¹⁷⁶ Otto, *Idea of the Holy*, p. 145.

¹⁷⁷ Otto, *Idea of the Holy*, p. 31.

Otto, and subsequently Radermacher, proposed a gradation of levels of intensity of such experiences.¹⁷⁸ Hence Radermacher argued that individuals engaged in divination are sometimes

shocked by their encounter with what they perceive to be a divine or spiritual response. These range from a slight ‘tingle’ to the full impact of the *mysterium tremendum*. One can, for instance, experience a slight tingle in the spine when listening to certain music, a sensation familiar to many people. At the other end of the spectrum, one can undergo an extraordinary process of physical and emotional shock evoked by an experience of a powerful other presence. The middle area of this spectrum might be described as a bodily shiver, which is more than a mere tingle and less than awe. We would contend that this shiver, neither pleasurable nor frightening, can be the sign that an authentic divinatory experience is taking place...¹⁷⁹

6.10.3 The *Mysterium* as Part of Astrological and Divinatory Experience

In its awe-full manifestation, the relevance of the *mysterium* to the astrologer was articulated by the Roman astrologer Marcus Manilius (fl. 1st century CE) when he wrote that astrology had been given to humankind ‘that awe might be roused not only by the appearance but by the power of things, and that mankind might learn wherein lay God’s greatest power.’¹⁸⁰

A contemporary precedent for Radermacher’s discussion of the *mysterium* can be found in Hyde’s discussion of the ‘judder’:

When an astrological prediction, or occasionally a striking piece of non-predictive astrology, manifests, it spooks people and gives them what we have come to call at the Company of Astrologers the ‘Blackett Judder’, in honour of Pat Blackett who insisted on naming the phenomenon. She believes that this is more than just a shiver down the spine. It is disturbing and unpleasant, a physically nauseous feeling, accompanied by disorientation and a mood of resistance. It is opposite to the joyous, uplifting thrill which an astrologer gets from seeing a pertinent and remarkable piece of radical symbolism played out. The judder is like a parallax problem, a misalignment of reality which occurs when a person tries to fit disturbing experiences into their usual framework of how the world works. It is a severe type of what psychologists call

¹⁷⁸ Otto particularly at *Idea of the Holy*, pp. 12 – 13; I cite Radermacher’s account since it is specifically grounded in divinatory practice.

¹⁷⁹ Radermacher, *Role of Dialogue*, p. 87.

¹⁸⁰ Marcus Manilius, G. P. Goold (ed. and tr.), *Astronomica* (Cambridge, Mass.: Harvard University Press, 1997 [1977]). p. 7 (Book 1, 34-7).

cognitive dissonance, in which things feel askew in the attempt to fit together paradoxical possibilities.¹⁸¹

This account raises the question of why the experience of astrologer and client would differ in the way described: why the astrologer would experience a ‘joyous, uplifting thrill’ while their client experienced cognitive dissonance. There is an echo here of the issue raised in chapter 4 in regards to Brockbank: whether astrology might only work for astrologers, and not for their clients. In his discussion of Hyde’s ‘judder’, Curry cited Lévy-Bruhl: ‘before the unintelligibility, at least relative, of the mystical world, where the most extraordinary and inexplicable transformations occur... our mind experiences discomfort, confusion and perplexity’.¹⁸² Curry concluded that in the case of a contemporary westerner, whose belief-structure was fundamentally scientific or theistic, divinatory experience would render them ‘vulnerable to being overwhelmed by what both of them rule out of court: the experience of objects turning out to be also subjects, for example the planets, coins, book or cards knowing and communicating something – and not just anything, either, but something intimately personal.’¹⁸³ This is substantiated by some remarks from the Danish astrologer Arlette Gürtler:

It is still mind-blowing. You never lose that kick. I can at any time lose my breath by seeing things mirrored in that way, and this is one of the reasons why I simply love astrology!... It is magic. It is so unbelievable, that even what you are thinking is mirrored in the horoscope.¹⁸⁴

There is consonance in such accounts with the discussion, in sub-section 6.9.1 above, of ‘pure experience’ undercutting dualistic ‘common-sense’.

The experience of intimacy with a pantheistic universe which exhibits agency where (from a theistic or scientific perspective) no agency should be, can therefore be a challenging and frightening experience. The astrologer Howard Sasportas (1948 – 1992), co-founder of the Centre for Psychological Astrology, asserted that ‘In order to

¹⁸¹ Maggie Hyde, ‘The Judder Effect—Astrology and Alternative Reality’ in *The Astrological Journal*, vol.43 no.5, Sept/Oct 2001, pp. 51 – 2.

¹⁸² Lucien Lévy-Bruhl, P. Rivière (tr.), *The Notebooks on Primitive Mentality* (Oxford: Basil Blackwell, 1975) p. 56; Curry in Willis and Curry, *Astrology Science Culture*, pp. 119 – 21.

¹⁸³ Curry in Willis and Curry, *Astrology Science Culture*, p. 120.

¹⁸⁴ Arlette Gürtler, interviewed by Kirstine Munk in: Munk, *Signs of the Times*, p. 158. I have changed two instances of ‘loose’ to ‘lose’ in this citation.

connect to the Self, we have to let go of our separate self-sense. And that's a scary prospect.'¹⁸⁵

Parallels for this discussion of encounters with the more-than-human as awe-inspiring can be found in a number of religious traditions. St John of the Cross (1542 – 1591) quoted the Gospel of Matthew: 'For those who want to save their life will lose it, and those who lose their life for my sake will find it', and remarked: 'This negation must be similar to a complete temporal, natural and spiritual death...'.¹⁸⁶ He remarked how unappealing this annihilation appeared, even to spiritual aspirants: 'they run from it as from death and wander about in search only of sweetness and delightful communications from God'.¹⁸⁷ In the Theravadan Buddhist tradition, Buddhaghosa (fl. C5th CE) compared the 'terror' that arose upon acquaintance with a reality beyond the individual self to that experienced by 'a timid man who wants to live in peace' seeing 'lions, tigers, leopards, bears, hyaenas, spirits, ogres... (etc)'.¹⁸⁸ Making an explicit connection with Otto's thought, Donald S. Lopez Jr. suggested that 'In Oriental art there may be no more evocative portrayal of what Rudolf Otto calls the *mysterium tremendum* than the wrathful deities of Tibetan Tantric Buddhism.'¹⁸⁹

In the preceding discussion I have suggested that Radermacher's use of the *mysterium* to articulate divinatory experience can be understood as an expression of Jamesian intimacy. The *mysterium* in this reading is a form of knowledge. It is primarily affective and in any given instance may be anywhere on a spectrum of intensity from weak to overwhelming. Also, the experience can be interpreted by the individual in a range of ways that includes: threat of annihilation by forces beyond the self, reassuring closeness to the more-than-human, and all points between. The contention that I have developed is that in any account of astrology as entirely outside the epistemological

¹⁸⁵ Howard Sasportas, 'The Quest for the Sublime' in Greene & Sasportas, *Dynamics of the Unconscious* (London: Arkana/Penguin, 1989) p.175.

¹⁸⁶ Matthew 16.25 (this translation: J.R.C. Cousland in: Michael D. Coogan (ed.), *The New Oxford Annotated Bible; New Revised Standard Version with the Apocrypha* (4th edn.), (Oxford: Oxford University Press, 2010 [1962]), p.1749); St John of the Cross, *The Ascent of Mount Carmel* in: St John of the Cross; Kieran Kavanaugh, Otilio Rodriguez (trs.), *The Collected Works of St. John of the Cross* (Washington, DC: ICS Publications, 1979), p.123 (II.6).

¹⁸⁷ St John of the Cross, *The Ascent of Mount Carmel*, p.122 (II.5).

¹⁸⁸ Buddhaghosa, Bhikkhu Ñāṇamoli (tr.), *The Path of Purification (Visuddhi Magga)* (4th edn.), (Kandy, Sri Lanka: Buddhist Publication Society, 1979 [1956]), p. 753 (XXI.29).

¹⁸⁹ Donald S. Lopez Jr., *Approaching the numinous: Rudolf Otto and Tibetan tantra, Philosophy East and West* Vol. 29 No. 4 (Oct. 1979) p. 467.

competence of science – what is termed astrology-as-divination in this thesis – the direct affective knowledge deriving from the *mysterium*, the experience of intimacy, would need to be included in evaluating the practice’s truth-status. The experience of intimacy would then be a type of knowledge (knowledge of acquaintance), at least as significant in evaluating the truth-status of this model of astrology as any propositional, factual knowledge (knowledge about) that derives from the practice.

To illustrate, here is an example of what can be interpreted as an experience of the *mysterium* from the astrologer Deborah Houlding. Recalling the moment when she was ‘struck by the realisation that astrology actually works’, she said:

I was looking at a chart at the time; I can’t remember whose chart it was, but this time instead of analysing it (like I usually did) I just lost myself in it. It was like a momentary lack of concentration where the creative part of my brain must have found time to rise up and kick a bit a space for itself alongside the rational part. Before that my approach to ‘studying’ a chart was to take each part of it to pieces and make lots of little notes that I later had to wrestle with to rule out the contradictions and generate themes for my analysis. But this time the connection of everything to everything just made perfect sense and I had some sort of emotional or sympathetic reaction to the energy of that chart, so that I felt very strongly affected by it. I’m sure it’s a common experience amongst astrologers, that you start to feel the energy of the chart to the extent that you feel the physical disabilities of the person whose chart you are looking at and become affected by their manner of expression and sense of humour. But it was my first experience of reading a chart *as a whole*, where everything fit perfectly and nothing left me confused. Appropriately I was on my knees bending over the chart – I remember that because although this didn’t occur to me until later, there was a quality of feeling very special, but also very humble and blessed; that was really why I was so awed by it.¹⁹⁰

It is significant for the discussion of types of knowledge that Houlding did not remember the specific chart or any information she derived from it, whilst the emotional experience was both powerful, and was experienced as knowledge of intimacy. Thus she also said, ‘It was a very powerful moment in which I let go of my innate disbelief, suddenly realised I loved astrology, and trusted it completely.’¹⁹¹ Further characterising the experience by reference to her own horoscope, she described it as ‘a very positive

¹⁹⁰ Deborah Houlding, interview, 2005.

¹⁹¹ Deborah Houlding, interview, 2005.

Jupiter-Neptune experience because of the idealistic sense of pure love, trust and expansion of mind.’¹⁹²

In the previous chapter I made use of the image of a trial by jury to elucidate the way in which the truth of astrology-as-science would be evaluated: intersubjective findings would be interrogated and tested to see if they cohered with a set of criteria which defined science. The case here is very different, since it would not be possible for anyone except the individual themselves to evaluate an experience such as Houlding recounted. This was the position taken by William James when he questioned what epistemological consequences followed from mystical consciousness. His conclusion was that there are three consequences: they can rightly be authoritative so far as the individual who had the experience is concerned; there is no authority which would compel other people to accept this authority uncritically; and, ‘They break down the authority of the non-mystical or rationalistic consciousness, based upon the understanding and the senses alone. They show it to be only one kind of consciousness. They open out the possibility of other orders of truth, in which, so far as anything in us vitally responds to them, we may freely continue to have faith.’¹⁹³

6.11 Circularity and Isolation

Understandings of astrology as true in a way that bypasses contemporary science are often dismissed by critics of astrology. The manner of this dismissal can be understood in the context of the coherence theory of truth. Often, it is simply assumed that if astrology is described as not coherent with science, that in itself would make it untrue. Hence for example Popper’s contention that ‘by making their interpretations and prophecies sufficiently vague [astrologers] were able to explain away anything that might have been a refutation of the theory [i.e. astrology]’.¹⁹⁴ Popper’s position largely coincides with that of Thagard, already cited in chapter 5: ‘coherence can lead to truth... under the assumption that natural science is the major source of human knowledge.’¹⁹⁵ And this in turn is the perspective that often informs critics of astrology,

¹⁹² Deborah Houlding, interview, 2005.

¹⁹³ James, *Varieties of Religious Experience*, p.423; pp.422-3 for the three points.

¹⁹⁴ Popper, *Conjectures and Refutations*, p. 37.

¹⁹⁵ Thagard, ‘Coherence, Truth, Scientific Knowledge’, p. 29.

as for instance in Mather's assertion that 'ordinary science accommodates astrology perfectly well, at least astrology as performed in consulting rooms.'¹⁹⁶

It is therefore rare to find critics of astrology who discuss, in any depth, its possible coherence with an explanatory system other than science. Dean characterised the idea 'that everything in the universe is interrelated' as the 'most popular vague assumption' by which, through a 'subsequent circular argument', astrologers tried to justify the practice of astrology.¹⁹⁷ And subsequently, along similar lines, Dean et al argued:

both synchronicity and time quality are examples of circular reasoning, as in 'astrology is explained by X, which, if it exists, explains astrology.' It is like claiming that levitation is explained by mysterious forces that, if they exist, explain levitation. Which is hardly a reason to be confident when jumping off a cliff.¹⁹⁸

Again, in a discussion of astrology-as-divination, Dean took issue with my suggestion that astrology 'hovers on the margins of comprehensibility', contending that 'Phillipson presents no evidence for his claim other than assertions and circular arguments (astrology is barely comprehensible because it is untestable and therefore barely comprehensible).'¹⁹⁹

Circularity is a common characterisation of, and objection to, the coherence theory. For instance, Roger Scruton characterised the theory as follows: 'The basic idea is this: try as you may, you will not be able to step outside thought and lay hold of some independent realm of facts. To say what makes one thought true is to express a thought: usually the *same* thought.'²⁰⁰ In similar vein, Huemer remarked that 'Perhaps the

¹⁹⁶ Arthur Mather, 'Modern Science, Epistemology...', p. 54.

¹⁹⁷ Geoffrey Dean, 'Does Astrology Need to be True? Part 1', p. 176.

¹⁹⁸ Dean, Geoffrey, Suitbert Ertel, Ivan Kelly, Arthur Mather, Rudolf Smit, 'The Phillipson Interview: Five leading researchers face 150 questions about scientific research into astrology' (2000, minor revisions 2003) at: www.astrology-and-science.com/d-phil2.pdf and also www.astrozero.co.uk/astroscience/phillintv.pdf (both accessed 28th August 2019), p.52, 16.5. The text is a version of the interview in Phillipson, *Astrology Year Zero*, expanded subsequent to the book's finalisation. The passage quoted here has been added to the discussion found at p. 161 of *Astrology Year Zero*. Dean et al distinguish here between synchronicity and 'time quality' as in Jung's statement that 'whatever is born or done at this particular moment of time has the quality of this moment of time' - C.G. Jung, 'Richard Wilhelm: In Memoriam' in: C. G. Jung, R. F. C. Hull (tr.), *The Spirit in Man, Art, and Literature: The Collected Works of C. G. Jung Volume 15* (Princeton, NJ: Princeton University Press, 1966 [1957 as 'Nachruf für Richard Wilhelm', *Das Geheimnis der goldenen Blüte: Ein chinesisches Lebensbuch* (5th edn.) (Zurich: Rascher)), pp. 56 – 7 (82).

¹⁹⁹ Geoffrey Dean, 'Divination: Astrology shows clear links with divinatory practices' (2013) - <http://www.astrology-and-science.com/A-divi2.htm> (accessed 28th August 2019).

²⁰⁰ Scruton, *Modern Philosophy*, p.101. Original emphasis.

central intuitive objection to the coherence theory is that the theory is committed to endorsing circular reasoning'.²⁰¹

In circular reasoning, 'one of the premisses [of an argument] depends on, or is even equivalent to, the conclusion.'²⁰² An example provided by O'Brien in a discussion of the coherence theory is: 'why believe God exists? It says so in the Bible. Why believe what is said in the Bible? Because God wrote it.'²⁰³ O'Brien observed, 'just because it hangs together doesn't mean it is true. It may be true, but its coherence doesn't make it so.'²⁰⁴ The fact that an explanation can be presented as circular does not invalidate it, as can be exemplified through the law of gravitation. Michael Shermer (founder of the Skeptics Society) pointed out the circularity here as follows: 'What is gravity? The tendency for objects to be attracted to one another. Why are objects attracted to one another? Gravity.'²⁰⁵

The appearance of circular reasoning does not therefore, in itself, suffice to dismiss the coherence theory of truth; rather, the problem is a combination of circularity with the absence of any other means of evaluation. Hence the importance, in Dean et al's account cited above, of the qualifier 'if it exists' applied to a possible explanation of astrology such as synchronicity. The fundamental problem they see in non-scientific explanations is the lack of evidence, which circular reasoning then serves to obfuscate. This concern with a lack of evidence can be seen, for instance, in their comment: 'we

²⁰¹ Michael Huemer, 'Foundations and Coherence' in Jonathan Dancy, Ernest Sosa and Matthias Steup (eds), *A Companion to Epistemology* (2nd edn.), (Oxford: Blackwell, 2010), p.25. Another account of the problem of circularity is: O'Brien, *Introduction to the Theory of Knowledge*, pp.77 – 9.

²⁰² Douglas Walton, 'Circularity' in Honderich Encyclopedia p. 135.

²⁰³ Lynch, *True to Life*, pp. 69 – 70. Lynch's example can be found (though he does not attribute it) in Descartes: 'although it is absolutely true that we must believe that there is a God, because we are so taught in the Holy Scriptures, and on the other hand, that we must believe the Holy Scriptures because they come from God... we nevertheless could not place this argument before infidels, who might accuse us of reasoning in a circle.' – Descartes; Elizabeth S. Haldane, G. R. T. Ross (trs.), 'Dedication' in *Meditations on First Philosophy*, in: *The Philosophical Works of Descartes, Volume I* (London: Cambridge University Press, 1979 [1911]) p. 133.

²⁰⁴ Lynch, *True to Life*, p.70.

²⁰⁵ Michael Shermer, *Why People Believe Weird Things* (2nd edn.) (New York: Henry Holt & Company, 2002) pp.57-8. Another discussion of apparent circularity in scientific thought is Gould's consideration of whether Darwinian natural selection reduces to "'survival of those who survive.'" Stephen Jay Gould, *Wonderful Life – The Burgess Shale and the Nature of History* (London: Vintage, 2000), p.236.

are supposed to believe simultaneously, that astrology, like gravity, is writ most exceedingly large, while its influence is most exceedingly difficult to demonstrate.’²⁰⁶

The weight of the critique against non-scientific explanations of astrology therefore largely coincides with the primary critique of the coherence theory, known as the ‘isolation objection’. This was discussed in the previous chapter and can be summarised here with John L. Pollock’s criticism that the coherence theory ‘cuts justification off from the world. A person could be justified in believing anything’, and his assertion: ‘All justification must eventually terminate with some epistemologically basic beliefs that do not require independent justification. And some of these beliefs must have *something* to do with the evidence of our senses.’²⁰⁷

Such considerations do not however offer a way beyond the problems of circularity and isolation. At the conclusion of chapter 4 I cited Horwich’s, observation that if truth is to be defined by correspondence to fact, then ‘accounts of what facts are, and what it is for a belief to correspond to a fact’ will be needed.²⁰⁸

In discussing the truth-status of astrology, however, it has emerged that there is more than one explanatory system: astrology-as-science, and astrology-as-divination, have been considered in the previous chapter and this one. Each eventuates in a different account of how astrology would manifest in the world and what form, therefore, the facts required to justify belief in astrology’s truth would take.

It is a feature of astrology, as a subject for epistemological discussion, that it not only permits such disparate interpretations, but finds advocates of each position, and many intermediate positions, in the contemporary West.

The consequence of this is that an invocation of ‘fact’ as final arbiter cannot end the problem of isolation or circularity commonly attributed to the coherence theory of truth, because the definition of ‘fact’ is itself dependent upon explanatory systems – of which there can be more than one.

²⁰⁶ Philipson, *Astrology Year Zero*, p. 152.

²⁰⁷ John L. Pollock, *Knowledge and Justification* (Princeton, NJ: Princeton University Press, 1974) p. 28, p. 29.

²⁰⁸ Horwich, ‘Theories of Truth’, p. 773.

6.12 Conclusion

This chapter has considered an ontological and epistemological framework under which the evaluation of astrology's truth-status would be beyond the competence of scientific methodology. The model of the universe that has been put forward to substantiate astrology-as-divination diverges widely from contemporary common-sense. It may be that many critics of astrology would conclude that the divergence is so wide as to mean that the case for astrology as true but not coherent with science has been proved untenable for all practical purposes, as when Dawkins argued: 'most of us happily disavow fairies, astrology and the Flying Spaghetti Monster, without first immersing ourselves in books of Pastafarian theology etc.'²⁰⁹ As was discussed in the previous chapter, such positions tend to presuppose a unitary account of truth, wherein coherence with one explanatory system would define all truth.

In a similar way, it is typically assumed in epistemological discussion that the coherence theory would need to be unitary. Hence Blanshard's observation: 'the coherence theory... holds that one system only is true, namely the system in which everything real and possible is coherently included.'²¹⁰ Although having written this, Blanshard immediately wondered, 'whether all that is actual might not be embraced in more than one system.'²¹¹ William James argued that 'the science and the religion are both of them genuine keys for unlocking the world's treasure-house to him who can use either of them practically. Just as evidently neither is exhaustive or exclusive of the other's simultaneous use.'²¹² The principle that a definition of truth should allow a plurality of ways in which truth could obtain is a foundation of James's pragmatic theory of truth, which I will consider in the following chapter.

²⁰⁹ Richard Dawkins, 'Preface to the Paperback Edition', *The God Delusion*, p. 15.

²¹⁰ Blanshard, *Nature of Thought* (Vol. 2), p. 276.

²¹¹ Blanshard, *Nature of Thought*, p. 276.

²¹² James, *Varieties of Religious Experience*, p.122.

Chapter 7: The Pragmatic Theory of Truth

The pragmatic theory of truth was introduced in chapter 3 as an approach that gives pre-eminence to practical consequences, so that the truth of a proposition or practice would be defined by whether it worked, or was useful – these qualifications being effectively synonymous. Under the pragmatic theory of truth, therefore, astrology would be true if it worked. This chapter will illustrate and evaluate that position. A major feature of the history of pragmatism is the distinction between Peirce’s and James’s accounts of the philosophy; this was introduced in chapter 3, and will be returned to in sections 7.2 and 7.3 below. First, to establish an astrological context, I will introduce some instances where it has been asserted that astrology works.

7.1 Assertions that Astrology Works

When astrologers assert that astrology works, or is useful, their intention is sometimes to claim primacy for the experiential knowledge gained by using astrology, which (in their view) would override negative scientifically-based evaluations of the subject’s truth-status. Hence the astrologer Sydney Omarr (1926 – 2003) wrote in 1965, ‘I “believe in” astrology because it works. Just as I believe that two and two equal four.’¹ This followed his account of astrology being generally seen as a pseudoscience, and therefore as a subject for belief rather than a source of knowledge.² A similar view was expressed by the astrologer Jane Ridder-Patrick in a meeting in 1990 when, asked if she believed in astrology, she replied: ‘No, I don’t believe in astrology. I know from more than ten years of almost daily hands-on experience that astrology is a valid and useful tool for understanding our world and our relationship with it.’³ She subsequently elaborated:

Belief for me is a leap of faith which is not based on concrete personal experience. When working with any tool or system, including astrology, I need some kind of PROOF that makes

¹ Sydney Omarr, *My World of Astrology* (Hollywood, CA, Wilshire: 1975) p.24. Omarr also refers to astrology working at p. 19 and p.26.

² Omarr, *My World of Astrology*, p. 20 and p. 22 respectively.

³ Jane Ridder-Patrick at a meeting of students in the astronomy department, Glasgow University, 1st March 1990, recalled by Nick Campion, confirmed by personal communication from Ridder-Patrick to Campion, 5th December 2000: Campion, *Astrology and Popular Religion*, p. 87, p. 87 n. 12.

sense to me. It doesn't have [to] be formal scientific proof which is so often, in any case, a complete non-sense for looking at astrology.'⁴

A similar emphasis on the primacy of personal experience and the inadequacy of science as an explanatory system for astrology was made by the astrologer Brad Kochunas:

I do not know why I believe what I believe, as it comes from the heart and not the head. After 25 years of experiencing astrology, my faith in it rivals the empiricist's faith in reason. I can offer words like elegance, beauty, mystery, but, in the end, I can only borrow from Martin Luther by saying, 'Here I stand, I can do no other.'⁵

When I interviewed Campion in 1998 he advocated an approach to judicial astrology that seemed as if it would bypass epistemology altogether – an approach whereby: 'we're asking not whether astrology is "true", a question which leads into all sorts of philosophical tail-chasing, but is it "useful"? Or, to put it another way, what use does it serve?'⁶ Subsequent to this interview, and after collecting a total of 837 completed questionnaires from astrologers between 1999 and 2011, Campion concluded:

Astrologers, as I found in my fieldwork, justify their use of astrology overwhelmingly on the pragmatic grounds that it is not a matter of belief but of knowledge based on personal experience, often citing C. G. Jung who, when asked whether he believed in God, replied 'I don't believe, I know'.⁷

Campion also, in describing interviews with two people who used astrology despite the disfavour with which it is regarded by their strongly Christian backgrounds, stated that both 'use astrology for purely pragmatic purposes; because it is useful... [and is] a practice which has helped them both.'⁸

⁴ Campion, *Astrology and Popular Religion*, p.87.

⁵ Brad Kochunas, *The Astrological Imagination: Where Psyche and Cosmos Meet* (Bloomington, IN: iUniverse, 2008) p.36. (Philosophically speaking it would make more sense to refer to 'the rationalist's faith in reason'; the context suggests that this is what he intended.)

⁶ Nick Campion, Garry Phillipson (interviewer), 'Interview with Nick Campion (Part 1)', *The Astrological Journal*, Vol. 41, No. 3, May 1999 (interview recorded 27th March 1998), p. 11

⁷ Campion, *Astrology and Popular Religion*, p.88; description of his questionnaires is at pp.167-8. The quotation from Jung is from his 1959 interview with John Freeman on the BBC's *Face to Face* television programme; Campion cited it from David Cox, *I Don't Need to Believe in God – I Know* (London: Guild of Pastoral Psychology, 1985). Jung clarified the intention behind his words in letters to Hugh Bennett and M. Leonard, both dated 5th December 1959; Jung, *Letters* Vol. 2, pp. 524 – 6.

⁸ Campion, *Astrology and Popular Religion*, p.200.

A similar perspective amongst some astrologers was reported by Bridget Costello in her thesis – the perspective that, in her words, ‘the whole point of astrology is that it is useful and it “works”’.⁹ She substantiated this by quoting a post from ‘one of the online astrology forums that I monitored during the course of this study... which is sponsored by one of the national astrology credentialing institutions and appears to attract mainly professional astrologers’.¹⁰ In the post an astrologer stated, ‘i can verify the success of my techniques by the fact that i have been in practice for 30 years, and my predictions and advice have proven to be accurate.’¹¹

That claim highlights an issue which would need to be addressed by any account of astrology as pragmatically true: if the meaning of ‘astrology works’ is that it provides accurate information, it is unclear how and why an astrology that worked would not therefore yield sufficient data under statistical analysis to be deemed true under the correspondence theory of truth. This in turn evokes the distinction between two forms of pragmatism – that of James, and that of Peirce. Rescher’s perspective on the distinction was as follows: ‘With Peirce, the objectivity of rational inquiry was paramount; in science, our results are robust since what works out for you works out for me because nature plays no favorites. With James, however, what counts is a matter of potentially idiosyncratic personal satisfactions.’¹² An approach such as that of Peirce, with its emphasis on objectivity and scientific methodology, would naturally seek correspondences between astrological propositions and facts in the world. If one sets to one side for a moment Rescher’s preference for Peirce’s approach (which is clear enough in the above quotation), one is left with the dichotomy between science and personal experience as arbiters of truth which has been a structural element in this thesis, particularly chapters 5 and 6. This dichotomy will be further explored in the present chapter, beginning with a consideration of Peirce’s and James’s versions of pragmatic truth in sections and 7.2 and 7.3 below.

⁹ Costello, *Astrology in Action*, pp. 162 – 3.

¹⁰ Costello, *Astrology in Action*, p. 160.

¹¹ Costello, *Astrology in Action*, p. 163, cited as ‘Post #9’. Lower-case ‘i’ is original.

¹² Rescher, *Pragmatism: Restoration of Scientific Roots*, p.280.

7.2 Pragmatic Truth according to Peirce

In formulating a definition of ‘truth’ for a philosophical dictionary, Peirce wrote:

Truth is that concordance of an abstract statement with the ideal limit towards which endless investigation would tend to bring scientific belief, which concordance the abstract statement may possess by virtue of the confession of its inaccuracy and one-sidedness, and this confession is an essential ingredient of truth.¹³

The involvement of ‘scientific belief’ as the arbiter of truth is central to this definition. Peirce made it clear that he saw truth as being approximated, not by philosophers – ‘These minds do not seem to believe that disputation is ever to cease’ – but by scientific research, wherein ‘Different minds may set out with the most antagonistic views, but the progress of investigation carries them by a force outside of themselves to one and the same conclusion.’¹⁴ He argued that ‘Science and philosophy seem to have been changed in their cradles. For it is not knowing, but the love of learning, that characterizes the scientific man; while the “philosopher” is a man with a system which he thinks embodies all that is best worth knowing.’¹⁵ In his dictionary definition, Peirce characterised the search for truth as an aspiration to ever-greater accuracy, citing the example of π (the ratio of a circle’s circumference to its diameter) as a value which may never be finally arrived at without remainder, yet nonetheless ‘in the progress of science its error will indefinitely diminish’.¹⁶

Peirce’s perspective reflects the fact that he was a realist. Thus, for example, he argued that, ‘it is necessary that a method should be found by which our beliefs may be caused by nothing human, but by some external permanency – by something upon which our thinking has no effect.’¹⁷ There is a close parallel here to the approach advocated by Dean et al. when they stated: ‘to adequately test astrology the participation of the astrologer must be eliminated.’¹⁸ The parallel can be further illustrated through the

¹³ Charles S. Peirce, ‘Logical [Truth]’, section of article ‘Truth and Falsity’ in: James Mark Baldwin (ed.), *Dictionary of Philosophy and Psychology, revised edn.* (Vol. II) (New York: MacMillan, 1920 [1901]) p. 718; also in: Peirce, *Collected Papers*, CP 5.565.

¹⁴ Peirce, ‘How to Make Our Ideas Clear’ pp. 299 - 300, also in: Peirce, *Collected Papers*, CP 5.406 – 7.

¹⁵ Peirce, *Collected Papers*, CP 1.44. From unpublished notes.

¹⁶ Peirce, ‘Logical [Truth]’, p. 718, also in: *Collected Papers*, CP 5.565.

¹⁷ Peirce, ‘The Fixation of Belief’, *The Popular Science Monthly* Vol. 12 (1877 – 8), p. 11. CP 5. 384.

¹⁸ Dean et al in *Recent Advances*, p.554 (previously cited in chapter 5 of this thesis).

analysis by Dean, Mather and Smit of their experience of astrology working, or at least appearing to work. As remarked in chapter 1 of this thesis, they recounted that, as astrologers, they

started in much the same way as any astrologer starts – we calculated charts, saw that they seemed to work, and were hooked... We read more and more books, we did more and more charts for more and more people, we went to meetings and talked to more and more astrologers (whose experience was much the same as ours), and we became more and more convinced that astrology worked.¹⁹

Astrologers, they continued, ‘see with their own eyes that astrology works even though science (apparently) cannot explain it. This is their everyday experience, and on this experience they rest their claims. What could be more fair, more reasonable, and more disarming of criticism? Who could argue against “it works”?’²⁰

This was not however their final position. Given the existence of reasoning errors (discussed in chapter 3 of this thesis) as an alternative explanation for astrology seeming to work, they concluded that this should be the explanation of choice, rather than astrology actually working, unless and until reasoning errors had been altogether ruled out. Hence their analysis continued: ‘But consider what “it works” actually means. *It means that all non-astrological influences leading to the same result have been ruled out.*’²¹ This interpretation of the phrase ‘it works’ raises questions; as Champion observed, the assumption that reasoning errors should be the preferred explanation whenever possible raises the question, ‘why such arguments should apply particularly to astrology’.²² The answer seems to be that such arguments are predicated upon the view, shared with Peirce, that subjective experience is unreliable and that one should therefore reserve the epithet ‘true’ only for practices capable of the intersubjective substantiation afforded by science.

¹⁹ Dean et al in: Phillipson, *Astrology Year Zero*, p.125. As remarked in chapter 1, although they contributed to the interview, I do not attribute these comments to Ertel and Kelly since they are not described as ever having been practising astrologers (see *Astrology Year Zero* p.125).

²⁰ Dean et al in: Phillipson, *Astrology Year Zero*, pp.131 – 2. Dean has also discussed the experience that astrology seems to work in: Dean, ‘Case for and Against Astrology’, particularly p.122. See also Champion’s discussion of Dean on astrology ‘working’ at Champion 2012 p.98.

²¹ Dean et al in: Phillipson, *Astrology Year Zero*, p. 132 (original emphasis).

²² Champion, *Astrology and Popular Religion*, p. 98.

To analyse the phrase ‘astrology works’ under a Peircean account of pragmatism is, therefore, substantially to recapitulate the scientific critique of astrology that has already been considered in this thesis, particularly in chapters 4 and 5. This is the view that truth should be defined by correspondence between proposition and fact, with the proviso that the meaning of ‘fact’ should be defined in a way that coheres with science. James K. Feibleman asserted that, for Peirce, pragmatism was ‘nothing more than the method that complements the correspondence theory of truth’.²³ This is an incomplete account, for Peirce had a fallibilist approach to the term ‘fact’, even in science. He characterised science as ‘not standing upon the bedrock of fact. It is walking upon a bog, and can only say, this ground seems to hold for the present. Here I will stay till it begins to give way.’²⁴ For Peirce, therefore, any individual fact was not to be relied on. As has been seen in this section however, he saw science as the way to truth – notwithstanding this potential for error to emerge in any particular judgement. Because the present thesis is concerned with the evaluation of the truth-status of astrology as a whole rather than with any specific astrologically-derived proposition, the net effect of Peircean pragmatism would be to treat the evaluation of astrology’s truth-status as a scientific, not a philosophical, task. Since scientific critiques have already been pursued in chapters 4 and 5, there will be little further discussion of Peirce in this chapter, and references to ‘pragmatism’ and its cognates will henceforth – unless qualified – be to Jamesian pragmatism.

7.3 Pragmatic Truth According to James

The brief treatment accorded to Peirce’s conception of pragmatic truth here can claim further support from James’s contention that science is sufficiently well-established as an authority in contemporary thought, that positions which regard it thus require relatively little description:

²³ James K. Feibleman, *An Introduction to Peirce’s Philosophy: Interpreted as a System* (New York: Harper & Brothers, 1946) p. 294.

²⁴ Charles S. Peirce, ‘The First Rule of Logic’ – a lecture delivered by Peirce on 21st February 1898, in Cambridge. In: Peirce, *Collected Papers* CP 5.589. For fallibilism in the thought of Peirce and James: Thayer, *Meaning and Action*, pp. 349 – 352.

There is included in human nature an ingrained naturalism and materialism of mind which can only admit facts that are actually tangible. Of this sort of mind the entity called “scientist” is the idol. Fondness for the word “scientist” is one of the notes by which you may know its votaries; and its short way of killing any opinion that disbelieves in it is to call it “unscientific”.²⁵

He went on to argue that this leaning was understandable in light of the advances brought about by science, but that for all this, ‘our science is a drop, our ignorance a sea.’²⁶

In introducing his version of pragmatism, James began by reiterating Peirce’s ‘pragmatic maxim’: ‘consider what effects, which might conceivably have practical bearings, we conceive the object of our concept to have. Then, our conception of these effects is the whole of our conception of the object’.²⁷ He immediately added however, ‘I think myself that it should be expressed more broadly than Mr. Peirce expresses it.’²⁸ The extra breadth of definition that James desired made his form of pragmatism very different from that of Peirce. As was seen in the previous chapter of this thesis, James saw some subjective experiences (such as mystical experience) as a source of truth. Barnard suggested that Jamesian pragmatism could ‘help us to assess the “truth” not only of our beliefs about God, but also the “truth” of our beliefs in other intangible phenomena as well... [including] beliefs about the unconscious/subconscious; beliefs about intuitions; beliefs about psychical phenomena, and so on.’²⁹ In this spirit I will pursue the possibility that James’s understanding of pragmatic truth can contribute significantly to the discussion of astrology’s truth-status.

In one of the talks he delivered in 1906-7, which were published as *Pragmatism*, James said:

“The true,” to put it very briefly, is only the expedient in the way of our thinking, just as “the right” is only the expedient in the way of our behaving. Expedient in almost any fashion; and expedient in the long run and on the whole of course; for what meets expediently all the

²⁵ William James, ‘Is Life Worth Living’, in: James, William, *The Will to Believe and Other Essays in Popular Philosophy* in: William James, Gerald E. Myers (ed.), *William James: Writings 1878 – 1899* (New York, NY: The Library of America, 1992 [1895]) p. 496.

²⁶ James, ‘Is Life Worth Living’, p. 496.

²⁷ Peirce, ‘How to Make Our Ideas Clear’, p. 293, also in: Peirce, *Collected Papers*, CP 5.402. (previously cited in ch. 3 of this thesis). Cited by James (with minor variations): ‘Philosophical Conceptions and Practical Results’, p. 1080.

²⁸ James, ‘Philosophical Conceptions and Practical Results’, p.1080.

²⁹ Barnard, *Exploring Unseen Worlds*, p.402, n.271.

experience in sight won't necessarily meet all farther experiences equally satisfactorily. Experience, as we know, has ways of *boiling over*, and making us correct our present formulas."³⁰

He repeated this definition in *The Meaning of Truth*, published in 1909, and it therefore seems clear that he regarded it as an accurate reflection of his thought.³¹ In that volume he went on to assert that 'truth for each man is what that man 'troweth' at that moment with the maximum of satisfaction to himself'.³² As will emerge in the following section, James's use of the terms 'expedient' and 'satisfaction' in the context of truth served as foci for criticisms of his version of pragmatism.³³

7.4 Criticisms of Jamesian Pragmatism as Relativistic

Peirce looked dimly on the innovations made by some of his successors in the nascent pragmatist movement (chiefly James and F. C. S. Schiller), seeing in them an infusion of relativism into the philosophical movement he had started. Thus he wrote: 'It seems to me a pity they should allow a philosophy so instinct with life to become infected with seeds of death in such notions as that of... the mutability of truth...'³⁴ Johnson remarked that 'Peirce... feared that James would admit the *merely* expedient as true.'³⁵ The term 'expedient' was used repeatedly, and in the face of criticism, by James. I remarked in chapter 3 of this thesis that astrology is often criticised on the grounds that, if its truth-status was not challenged, this would invite relativism and a collapse of all epistemological authority. James, too, has been repeatedly accused of condoning relativism. I suggest that this commonality hints at the congeniality of pragmatism as a context for astrology – a possibility I will explore in the remainder of this chapter, with evaluation of relativism to follow in section 7.10, below.

³⁰ James, *Pragmatism*, p.583. Original emphases.

³¹ James, *Meaning of Truth*, p.823, p.824.

³² James, *Meaning of Truth*, p.874.

³³ In addition to the terms 'expedient' and 'satisfaction', James also reaped opprobrium for his discussion of the 'cash-value' of beliefs – this is discussed by: George Cotkin, 'William James and the Cash-Value Metaphor', *Et Cetera* (Spring 1985) pp. 37 – 46.

³⁴ Peirce, 'A Neglected Argument for the Reality of God', in Peirce: *Collected Papers*, CP 6. 485. Originally published in *Hibbert Journal*, Vol. 7 (1908), pp. 90 – 112.

³⁵ Johnson, *Focusing on Truth*, p.68, original emphasis.

James's pragmatic account of truth has been criticised in many quarters: in *The Meaning of Truth* he mentioned fifteen critics of the theory on one page alone.³⁶ Many of these criticisms can be epitomised by Russell's treatment of pragmatic truth in his *History of Western Philosophy*.³⁷ Russell quoted James's statement (cited in the previous chapter of this thesis) that 'if the hypothesis of God works satisfactorily in the widest sense of the word, it is true', then remarked: 'I have always found that the hypothesis of Santa Claus "works satisfactorily in the widest sense of the word"; therefore "Santa Claus exists" is true, although Santa Claus does not exist.'³⁸ His objection was that 'With James's definition, it might happen that "A exists" is true although in fact A does not exist.'³⁹ Bradley made the same point even more forcefully when he argued that a Jamesian pragmatist 'must hold any idea, however mad, to be the truth, if any one will have it so.'⁴⁰

James, and subsequent advocates of his thought, have regarded these and similar critiques of his thought as misguided. Before turning (in section 7.6) to a detailed account of the metaphysical underpinning of James's pragmatism, I first turn to accounts of astrology as being (like Russell's Santa Claus) useful but not true. This will exemplify pragmatic thought's relevance to astrology.

7.5 Accounts of Astrology as Not True but Useful

An account of astrology as not true but useful was introduced by Dean et al, when they wrote that users of astrology,

³⁶ James, *The Meaning of Truth*, p.829.

³⁷ Bertrand Russell, *History of Western Philosophy and its Connection with Political and Social Circumstances from the Earliest Times to the Present Day* (London: George Allen and Unwin, 1946) pp. 844 – 6.

³⁸ James, *Pragmatism*, p. 618, cited at: Russell, *History of Western Philosophy*, p. 844; Russell, *History of Western Philosophy*, p.845.

³⁹ Russell, *History of Western Philosophy*, p. 845.

⁴⁰ F.H. Bradley, 'On Truth and Practice', *Mind* Vol.13, No.51 (July 1904), p.322. Cited by James, *The Meaning of Truth*, p.866. Some terminological elision is involved in applying Bradley's critique to Jamesian pragmatism, thus: Bradley's critique was specifically directed against 'the Personal Idealist', whom he identified by footnote as F. C. S. Schiller and specifically the latter's essay 'Axioms as Postulates' in Henry Sturt (ed.), *Personal Idealism: Philosophical Essays by Eight Members of the University of Oxford* (London: Macmillan, 1902) pp. 47 – 133. In his essay, Schiller stated that 'the whole subsequent argument [of the paper] has already had its main lines mapped out by... the *Weltanschauung* which Prof. James has called pragmatism and radical empiricism.' (Schiller 1902, p. 63). Further, Bradley himself identified the object of his attack as pragmatism at p. 321 and p. 323 of his paper.

tend to focus on feelings: they seek spiritual insight, emotional support, and direction to life, so when they claim that “astrology works”, they tend to mean that it “feels good” or “it is meaningful”. But many things are meaningful without being true (Santa Claus, Superman, faces in clouds). So this kind of astrology does not need to be true, and attacking it is on a par with attacking Santa Claus.⁴¹

In a subsequent elaboration of two possible accounts of astrology, they proposed the terms ‘objective astrology’ (which ‘*needs to be true*’) and ‘subjective astrology’ (which ‘*does not need to be true*’).⁴² In the terms of this thesis, Dean et al’s conception of ‘objective astrology’ means astrology which science could validate as a source of information. In their account, ‘subjective astrology’ would be evaluated according to whether it ‘give[s] a direction and purpose to our life... provide[s] benefit, self-understanding, insight, empowerment.... enrich[es] our lives in ways that the rational cannot as religion, myth, poetry and fiction do’.⁴³

Similarly, Culver and Ianna concluded that astrology ‘does work, but only in the mind of the believer’.⁴⁴ In her thesis, Kirstine Munk suggested that ‘the type of women that one often finds in astrological consultations’ are people for whom ‘truth is not something in the outside world, but resides within the individual and is accessible through intuitive processes... They consider truth to be a private matter.’⁴⁵ She cited, and accepted, Dean et al’s distinction between subjective and objective astrology, taking ‘subjective astrology’ to define – exclusively – the subject-matter of ‘any anthropological, ethnographic or religious science study’ of astrology.⁴⁶ Her perspective was that ‘just like stories, astrology or other divination systems and the myths that surround them do not have to be true’; and that, ultimately, ‘astrology does not work from an epistemological point of view’.⁴⁷

In her thesis, Costello also raised the possibility that astrology could work without being true:

⁴¹ Geoffrey Dean, Ivan W. Kelly, Arthur Mather and Rudolf Smit, ‘Astrology’ in Michael Shermer (ed.), *The Skeptic Encyclopedia of Pseudoscience (Volume One)* (Santa Barbara, CA: ABC-CLIO, 2002) p.38.

⁴² Dean et al in: Phillipson, *Astrology Year Zero*, p.129, original emphases.

⁴³ Dean et al in: Phillipson, *Astrology Year Zero*, p.129.

⁴⁴ Culver and Ianna, , *Astrology: True or False?*, p. 220. They cited Geoffrey Dean’s perspective on this matter as it appeared in: Geoffrey Dean, ‘Does Astrology Need to be True?’ (Parts 1 and 2).

⁴⁵ Munk, *Signs of the Times*, p. 108.

⁴⁶ Munk, *Signs of the Times*, p. 18, citing Dean et al in Phillipson, *Astrology Year Zero*, pp. 129 - 30.

⁴⁷ Munk, *Signs of the Times*, p. 282, p. 25.

a faulty astrological prediction can be judged successful from the point of view of the actor whose goal is the creation of a certain relational or emotional state, insofar as the act of prediction facilitates that particular construction. I'm not concerned here that astrology may not 'work' from a scientific standpoint (by a failure to specify mechanisms, or to lend itself to repeatable findings, etc.).⁴⁸

The idea of 'subjective astrology' may be fleshed out through Rudolf Smit's account. As seen in chapter 2 of this thesis, Smit became disillusioned with astrology as a source of truth in the wake of disappointing results from scientific tests. He recounted that, years after giving up astrological practice,

I... tried reading horoscopes where I warned their owners in advance that there was no factual truth in astrology. I warned them that the reading would be an exercise in looking at astrological symbolism, that's all. The result might seem insightful but in reality would be only make-believe. All of them agreed to this in advance. Amazingly, there was still a Moment Supreme, and they went away quite happy!⁴⁹

The term 'Moment Supreme', for Smit, signified the moment at which 'to [an astrological client's] unspeakable astonishment, their horoscope analysis seemed to correctly describe not only their inner being but also the circumstances in their life'.⁵⁰ He argued that astrology in itself was 'not a source of factual knowledge', and indeed was 'something that is untrue' but suggested that through the involvement of a sympathetic astrologer it could nonetheless be 'a wonderful tool for promoting therapy by conversation.'⁵¹ In his view therefore, 'what matters is the astrologer not the astrology', with the horoscope being 'like a celestial inkblot, not a source of information'.⁵²

A possible elaboration of how it could be that a horoscope could function as an inkblot in a Rorschach test can be found in Munk's thesis. Drawing a parallel with Zulu divination rituals, she argued: 'In an astrological divination session the use of metaphors, myths, and anecdotes, allusive language and too much verbal information

⁴⁸ Costello, *Astrology in Action*, p. 31 n.12

⁴⁹ Both quotations from: Rudolf Smit, 'Moment Supreme: Why Astrologers Keep Believing in Astrology' (2011) - www.astrology-and-science.com/a-mome2.htm (accessed 30th August 2019). This is a translated and updated version of an article published in the Dutch journal *Skepter* in March 1983.

⁵⁰ Smit, 'Moment Supreme'.

⁵¹ Smit, 'Moment Supreme'.

⁵² Smit, 'Moment Supreme'.

also forces the client to actively select pieces of information and the meaning-making efforts place the ritual subject in the centre of negotiation'.⁵³

The view of astrology as useful but not true can also be seen in a book by Kochunas, who characterised astrology as 'one example of humanity's numerous and rich forms of imagining.'⁵⁴ Elaborating on this, he argued: 'Astrology works, not because of its factual validity (the literal truth of things) but because of its functional validity (its usefulness in providing a satisfying aesthetic). [...] Astrology works in the fashion of great drama, lyric, narrative, or religious experience.'⁵⁵ In substantiating his perspective, Kochunas cited the psychologist Rollo May (1909 – 94) and the psychotherapist Thomas Moore, both of whom have espoused positions consonant with the 'subjective astrology' of Dean et al.⁵⁶ Thus, May contended that 'Astrology is a myth and... has both the shortcomings and the positive effects of myths' – and in his view, 'Myth making is essential in gaining mental health'.⁵⁷ Moore described astrology as 'a form of imagination emerging from nature... an applied poetics'⁵⁸ He referred to astrology as 'a way to find deep guidance', 'Whether or not we practice astrology technically', and on another occasion described 'the ritual of astrology itself' as 'in no way necessary and not even important'.⁵⁹ A description which clarifies that attitude came when he stated that, at times when he found it difficult to write, 'rather than looking for some circumstance in the physical world around me to explain the "block", I assume that my moon is "void of course"... and I wait for the "sky" to change.'⁶⁰ (In horary astrology, the Moon is 'void of course' when it forms no aspect before leaving its current sign; Lilly remarked that in such a case, 'All manner of matters goe hardly on'.)⁶¹

⁵³ Munk, *Signs of the Times*, p. 234.

⁵⁴ Kochunas, *Astrological Imagination*, p. xiii.

⁵⁵ Kochunas, *Astrological Imagination*, pp. 32.

⁵⁶ Kochunas, *Astrological Imagination*: p. 27 and p. 32 for May, pp. 25 – 26 and p. 54 for Moore.

⁵⁷ Rollo May, *The Cry for Myth* (New York, NY: Delta, 1991) p.22 n.1; p.1. Both cited in: Kochunas, *Astrological Imagination*, p. 32.

⁵⁸ Thomas Moore, *The Re-Enchantment of Everyday Life* (New York: Harper Collins, 1996) p. 317

⁵⁹ Moore, *Re-Enchantment of Everyday Life*, p. 320; Thomas Moore, *The Planets Within: The Astrological Psychology of Marsilio Ficino (revised edn.)* (New York: Lindisfarne, 1989 [1982]) p. 120.

⁶⁰ Moore, *Re-Enchantment of Everyday Life*, p. 320.

⁶¹ Lilly, *Christian Astrology*, p. 299, sic for 'goe'. This definition is common, being repeated e.g. in: Louis, *Horary Astrology*, p. 139.

Moore's description brings a particular issue into focus. He used the *idea* of a void of course Moon, without reference to physical events in the sky. Curry's definition of astrology, which I introduced in chapter 1, refers to 'the practice of relating the heavenly bodies to lives and events on earth...'.⁶² If the movements of the physical planets and other horoscopic factors are not referred to, it is therefore open to question whether the practice under discussion would qualify as 'astrology'. I will return to this point in section 7.8.1 below. Before that it is necessary to explore the 'useful but not true' paradigm in a pragmatic context. The term 'satisfaction' is key to this endeavour.

7.5.1 The Contested Definition of Satisfaction

The term 'satisfaction' recurs in discussions of pragmatic truth, and also of astrology, in ways which reiterate the proposed split between subjective and objective forms of astrology. Thus for example Peirce wrote that 'as soon as a firm belief is reached we are entirely satisfied, whether the belief be false or true.'⁶³ In this account, satisfaction is not related to truth. The critique of Jamesian pragmatism as relativistic is sometimes expressed as if this were James's position – as when, for instance, Thomas S. Knight (1921-) asserted: 'For James ideas become true as individuals engage in satisfying conduct. They have no ontological status independent of action. Truth is thus subjective – the satisfaction of one person.'⁶⁴ (This hardly does justice to James's perspective, but I will reserve discussion of that for the next section.)

A similar view of satisfaction can be seen when Dean argued that 'the truth delivered by astrology is actually satisfaction (it provides meaning, it enriches life, it does good) rather than accuracy (freedom from error)'.⁶⁵ By deploying the categories of subjective and objective astrology, or satisfaction and accuracy, Dean et al provided an account of the experience that 'astrology works' which allows some value to the experiences gained through using astrology, whilst at the same time characterising astrology as not true. The tension inherent in this conception is revealed by Smit's remark that 'to

⁶² Curry, 'Astrology' in *Encyclopaedia of Historians*, p.55.

⁶³ Peirce, 'The Fixation of Belief', p. 6, CP 5. 375.

⁶⁴ Thomas S. Knight, *Charles Peirce* (New York: Twayne, 1965) p. 61.

⁶⁵ Dean, 'Truth of Astrology Competition', p.51. Dean referred back, for the first iteration of the satisfaction/accuracy distinction, to: Geoffrey Dean & Arthur Mather, 'Key Topic 1: Is the Scientific Approach Relevant to Astrology?' *Correlation*, Vol.13 No.1 (1994).

receive therapy by conversation, and their Moment Supreme, [astrologers' clients] still have to believe in something that is untrue.'⁶⁶

7.6 The Case for Jamesian Pragmatism

Jacques Barzun argued that the significance of James's philosophy has been slow to be acknowledged by philosophers, largely because 'some of [his] formulations have been distorted and others taken too fragmentarily to be useful'.⁶⁷ Such distortion and fragmentation may be glimpsed in the fact that Kirkham and Englebretsen, in their respective recent works on epistemology, cite James's statement 'truth may vary with the standpoint of the man who holds it' as representative of his position, when in fact he used those words to characterise a misconception of his position, arising from what he called 'vicious abstractionism'.⁶⁸ Similarly, Russell's argument (cited above) that 'the hypothesis of Santa Claus "works satisfactorily in the widest sense of the word"' disproved a caricature of James's position, not the position as James actually formulated it.⁶⁹ Graham Bird pointed out that in his analysis, Russell 'seems to regard the question of "working satisfactorily" as excluding all the normal tests which provide us with evidence on the matter, and on which Russell relies in his own view that Santa Claus does not exist.'⁷⁰

In similar vein, Eames suggested that 'An analysis of some of the early critics [of James's pragmatic theory of truth] shows that most of them did not understand the context in which James was writing.'⁷¹ Eames gave as an example A. J. Ayer's criticism of James's theory of truth: 'When we verify a proposition we discover it to be true, but we do not confer truth upon it. Its truth or falsehood belongs to it quite independently of our knowledge, because of its relation to the objective facts.'⁷² As Eames remarked, such a criticism does not refute James's argument but simply restates

⁶⁶ Smit, 'Moment Supreme'

⁶⁷ Jacques Barzun, *A Stroll with William James* (Chicago, IL: University of Chicago Press, 1983) p. 301.

⁶⁸ Kirkham, *Theories of Truth*, p. 97; Englebretsen, *Bare Facts and Naked Truths*, p. 47; James, *The Meaning of Truth*, p.951.

⁶⁹ Russell, *History of Western Philosophy*, p.845.

⁷⁰ Graham Bird, *William James (The Arguments of the Philosophers)* (New York, NY: Routledge & Kegan Paul, 1986), p.36.

⁷¹ S. Morris Eames, 'The Meaning of Truth in James' in: Walter Robert Corti (ed.), *The Philosophy of William James* (Hamburg: Felix Meiner, 1976), p.173.

⁷² A. J. Ayer, *The Origins of Pragmatism: Studies in the Philosophy of Charles Sanders Peirce and William James* (London: MacMillan, 1968) p. 204. Cited in: Eames, 'Meaning of Truth in James', p.173.

the premises of an opposing position, in the process begging various questions such as: ‘What is meant by *independent*? What is meant by *relation*? What is meant by *objective*? What is meant by *facts*?’.⁷³ The presentation of a conflicting view as if it had already (off-camera, as it were) disproved some or all of James’s thought is a recurrent phenomenon, and I will remark upon similar instances later in this chapter. If an ontology had been established beyond doubt whereby objective facts could always be consulted when truth needed to be determined, then James’s approach to truth would indeed be otiose. The impossibility of ever arriving at the requisite objectivity is however a central premise of James’s metaphysics, as shown for instance in his assertion: ‘Purely objective truth... is nowhere to be found... The trail of the human serpent is thus over everything.’⁷⁴ In the next two sub-sections (7.6.1 and 7.6.2) I will survey, respectively, this perspective, and its grounding in science.

7.6.1 Limits to Objectivity and Rationality

A central element in James’s thought is his partial skepticism – his view that human knowledge of the world is limited. He used the image of household pets to make this point on several occasions:

That the world of physics is probably not absolute, all the converging multitude of arguments that make in favour of idealism tend to prove; and that our whole physical life may lie soaking in a spiritual atmosphere, a dimension of being that we at present have no organ of apprehending, is vividly suggested to us by the analogy of the life of our domestic animals. Our dogs, for example, are in our human life but not of it. They witness hourly the outward body of events whose inner meanings cannot, by any possible operation, be revealed to their intelligence, - events in which they themselves often play the cardinal part.⁷⁵

James’s reference here to a ‘spiritual atmosphere’ shows the crucial relevance to his ontological perspective of mystical experience. As was seen in the previous chapter of this thesis, James considered such experiences to ‘break down the authority of the non-mystical or rationalistic consciousness... [showing] it to be only one kind of

⁷³ Eames, ‘Meaning of Truth in James’, p.173.

⁷⁴ James, *Pragmatism*, p.515.

⁷⁵ James, ‘Is Life Worth Living’, p. 499. Variants of the canine simile recur at: James, *Pragmatism*, p.619; James, *Pluralistic Universe*, p.771.

consciousness. They open out the possibility of other orders of truth'.⁷⁶ In *A Pluralistic Universe* – first delivered in lecture form in 1908 and published in 1909, the year before his death – James wrote, “That secret of a continuous life which the universe knows by heart and acts on every instant cannot be a contradiction incarnate. If logic says it is one, so much the worse for logic.”⁷⁷ He concluded:

For my own part, I have finally found myself compelled to *give up the logic*, fairly, squarely, and irrevocably. It has an imperishable use in human life, but that use is not to make us theoretically acquainted with the essential nature of reality [...] Reality, life, experience, concreteness, immediacy, use what word you will, exceeds our logic, overflows and surrounds it... I prefer bluntly to call reality if not irrational then at least non-rational in its constitution, - and by reality here I mean reality where things *happen*, all temporal reality without exception.⁷⁸

James’s position is controversial; for instance, Mueller contended that James arrived at his philosophical position through something akin to a religious conversion, and argued that ‘Anyone who disregards logic should quit writing philosophical books which intend to be true and not false – and take to football instead.’⁷⁹ This however is another instance of a philosopher attacking a caricature of James’s true position: as will emerge below, his attitude to logic and conceptual thought was not dismissive. His point was simply that they did not provide a *complete* approach to truth; and whilst his philosophy was clearly informed by spiritual experience, it also grew from James’s observations of the development of scientific thought – to which I now turn.

7.6.2 James on the Application of Science in Philosophy

James recognised the contribution of science to contemporary society, writing that ‘Our debt to science is literally boundless’ and acknowledging that ‘the excesses to which the romantic and personal view of nature may lead, if wholly unchecked by impersonal rationalism, are direful.’⁸⁰ He was, therefore, aware of the dangers of relativism. He also, however, saw dangers in what might now be dubbed scientism:

⁷⁶ James, *Varieties of Religious Experience*, p.423; pp.422-3 for the three points.

⁷⁷ James, *Pluralistic Universe*, p.723.

⁷⁸ James, *Pluralistic Universe* p.725 – 6.

⁷⁹ Gustav Emil Mueller, ‘On William James’ “Radical Empiricism” in: Walter Robert Corti (ed.), *The Philosophy of William James* (Hamburg: Felix Meiner, 1976), p.151.

⁸⁰ James, ‘What Psychological Research Has Accomplished’, p. 698.

Although in its essence science only stands for a method and for no fixed belief, yet as habitually taken, both by its votaries and outsiders, it is identified with a certain fixed belief – the belief that the hidden order of nature is mechanical exclusively, and that non-mechanical categories are irrational ways of conceiving and explaining even such things as human life.⁸¹

James identified three arguments against taking science as the sole arbiter of truth. I will give a brief treatment of these in the remainder of this section, followed by a definition of the worldview (‘radical empiricism’) he developed to address them in section 7.7 below, with more detailed analysis of the issues treated here following. To begin, then, I proceed to James’s tripartite account of the philosophical issues he saw arising from the scientific advances of his time:

First, developments in contemporary philosophy ‘have emphasized the incongruence of the forms of our thinking with the “things” which the thinking nevertheless successfully handles.’⁸² James mentioned John Stuart Mill (1806 – 73), Hermann Lotze (1817 – 81) and Christoph von Sigwart (1830 – 1904) as exemplars of such developments. He cited Mill to this effect:

The order of nature, as perceived at a first glance, presents at every instant a chaos followed by another chaos. We must decompose each chaos into single facts... [in order to do this] mental analysis, however, must take place first. And every one knows that in the mode of performing it, one intellect differs immensely from another.⁸³

The issue, for James, was the lack of direct correspondence between experience and conceptual thought: ‘What we experience, what *comes before us*, is a chaos of fragmentary impressions interrupting each other; what we *think* is an abstract system of hypothetical data and laws.’⁸⁴

James’s second point began with a different field of science – evolutionary theory – and arrived, again, at the conclusion that human beings are in touch only with an

⁸¹ James, ‘What Psychical Research Has Accomplished’, p. 698.

⁸² William James, ‘Humanism’, in: William James, Ralph Barton Perry (ed.), *Collected Essays and Reviews by William James* (London: Longmans, Green and Co., 1920), pp.448 – 9. Originally published in: *Nation*, 78, 1904, pp. 175 – 6.

⁸³ John Stuart Mill, *A System of Logic, Ratiocinative and Inductive: Being a Connected View of the Principles of Evidence and the Methods of Scientific Investigation* (8th edn.) (New York: Harper & Brothers, 1882 [1843]) p. 272, Book 3 Chapter VII § 1. Cited in: James, *Principles* Vol. II p. 634, n.1.

⁸⁴ James, *Principles*, Vol. II, p. 634.

interpretation of reality. The theory of evolution, James wrote, ‘has made us ready to imagine almost all our functions, even the intellectual ones, as “adaptations,” and possibly transient adaptations, to practical human needs.’⁸⁵ The implications of evolution for humanity’s epistemological capacity was a concern for Darwin himself, as evidenced when he wrote:

The horrid doubt always arises whether the convictions of man’s mind, which has been developed from the mind of the lower animals, are of any value or at all trustworthy. Would any one trust in the convictions of a monkey’s mind, if there are any convictions in such a mind?⁸⁶

Concluding his three points which undermine any claim for science to be an absolute standard for truth, James wrote, ‘Lastly, the enormous growth of the sciences in the past fifty years has reconciled us to the idea that “Not quite true” is as near as we can ever get.’⁸⁷ Levinson elucidated this as ‘the recognition that natural scientists have abandoned the quest for certainty in favor of statistical analysis and the generation of probability statements.’⁸⁸ James was writing in 1904, and therefore before much of the ‘new science’ discussed in chapter 5 had emerged, but it seems likely that he would have recognised further support for his principle in some elements thereof. For instance, the indeterminacy principle ‘claims statistical analysis is essential because we cannot predict the future behavior of a particle precisely in the individual case because of the indivisible relation of an observer and observed.’⁸⁹

It may well be expedient, in scientific analysis, to aspire toward the exclusion of subjective factors. But then the distinction between ‘subjective’ and ‘objective’ is *made* true by its usefulness – it is not an absolute ontological truth. For James, the concept of dualism itself is subject to pragmatic, functional considerations. Thus he argued that *‘the attributions “subject” and “object”, “represented” and “representing”, “thing” and “thought”, indicate a practical distinction of the utmost importance, but which is*

⁸⁵ James, ‘Humanism’, p.449.

⁸⁶ Charles Darwin, Francis Darwin (ed.), *The Life and Letters of Charles Darwin Vol. 1* (London: John Murray, 1887), pp.315-6, letter to William Graham, 3rd July 1851. Quoted in Taliaferro, Charles, *Evidence and Faith*, (Cambridge University Press, 2005), p.259.

⁸⁷ James, ‘Humanism’, p.449. To integrate James’s points with this discussion, the points which are second and third in his text appear in reverse order here.

⁸⁸ Levinson, *Religious Investigations of William James*, p. 178.

⁸⁹ Yutaka Tanaka, ‘The Individuality of a Quantum Event’ in Timothy E. Eastman and Hank Keeton (eds.), *Physics and Whitehead: Quantum, Process, and Experience* (Albany: NY, State University of New York, 2003) pp. 166-7.

merely of a FUNCTIONAL order, in no way of an ontological order, as classical dualism conceives of it.’⁹⁰

Commenting on this aspect of James’s thought, Seigfried commented that,

James incisively undercuts the naiveté of the presumption that the scientific method alone discloses the real world by situating science along a continuum of selective, creative activity. He dislodges scientific explanations as paradigmatic for all explanations by showing that such explanation itself is a subset of the creative imposition of form on an otherwise chaotic world.⁹¹

Having looked at James’s reservations regarding humanity’s epistemological capabilities, I turn now to the broad philosophical context which informed his pragmatism.

7.7 Radical Empiricism

William James described radical empiricism as ‘my *Weltanschauung*’; it is (as Cormier put it) ‘a theory of the real and how we know it’.⁹² Its breadth of application has led to a variety of interpretations: some of James’s commentators have categorised it as an ontology, others as an epistemology.⁹³ In what follows it will emerge that, for James, the term comprises both ontology and epistemology. James’s definition of radical empiricism is tripartite, comprising a ‘postulate’, a ‘statement of fact’, and a ‘generalized conclusion’.⁹⁴ A consideration of each now follows – beginning with a concise definition and then a broader discussion of the ways in which radical empiricism is relevant to the pragmatic characterisation of astrology’s truth-status.

⁹⁰ William James, Stanley Appelbaum (tr.), ‘The Notion of Consciousness’ in: William James, *Essays in Radical Empiricism* (Mineola, NY: Dover, 2003 [1912]) p. 122. This talk was written and delivered in French by James, and appeared in the original edition of *Essays* as ‘La Notion de Conscience’; the version quoted here is from a translation into English by Stanley Appelbaum, made for the 2003 reprint of *Essays*. The emphases and capitalisation are original.

⁹¹ Seigfried, *William James’s Radical Reconstruction*, p. 161.

⁹² Cormier, *Truth is What Works*, p. 9; William James, ‘A World of Pure Experience’, in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1904]) p. 1160.

⁹³ Ruth Anna Putnam, ‘Introduction’ in: Ruth Anna Putnam (ed.), *The Cambridge Companion to William James* (Cambridge: Cambridge University Press, 1997) p.5; Donald A. Crosby, *The Philosophy of William James: Radical Empiricism and Radical Materialism* (Lanham, MA: Rowman & Littlefield, 2013) p. 13.

⁹⁴ James, *Meaning of Truth*, p. 826.

7.7.1 Radical Empiricism – Concise Definition

First, the ‘postulate’ is that ‘the only things that shall be debatable among philosophers shall be things definable in terms drawn from experience.’⁹⁵ The focus on experience is what qualifies James’s approach as belonging in the tradition of empiricism – a philosophy, as James put it, ‘like that of Hume and his descendants’⁹⁶ Already however at this stage of the definition, a departure is implied from the tradition of empiricism; James elaborated upon this in the second and third portions of his definition, but it lurks here in the term ‘experience’. As was discussed in the previous chapter, for James this meant ‘pure experience’, which is ‘subjective and objective both at once.’⁹⁷ James’s restriction of debate to matters with an experiential base therefore amounts, as John J. McDermott put it, to a rejection of ‘the age-old philosophical tendency to consider as legitimate subjects for philosophical analysis only the products of an exclusively conceptual apparatus.’⁹⁸

The second part of James’s definition is the ‘statement of fact’: ‘the relations between things, conjunctive as well as disjunctive, are just as much matters of direct particular experience, neither more so nor less so, than the things themselves.’⁹⁹ This is an explicit break with the empiricist tradition; James lamented that ‘ordinary empiricism... has always shown a tendency to do away with the connections of things’.¹⁰⁰ An example of the atomistic approach that he criticised can be seen in Hume’s statement that ‘*the mind never perceives any real connexion among distinct existences*’.¹⁰¹ By contrast, in the third part of his definition – the ‘generalized conclusion’ – James asserted that ‘the parts of experience hold together from next to next by relations that are themselves parts of experience. The directly apprehended universe... possesses in its

⁹⁵ James, *Meaning of Truth*, p.826.

⁹⁶ James, ‘World of Pure Experience’, p. 1160.

⁹⁷ James, ‘Does “Consciousness” Exist?’, p. 1145. James’s understanding that the ‘experience’ treated in radical empiricism is ‘pure experience’ is elaborated upon by (e.g.) Barnard, *Exploring Unseen Worlds*, p. 142.

⁹⁸ John J. McDermott, ‘Introduction’ in: William James; Frederick Burkhardt, Fredson Bowers (eds.), *Essays in Radical Empiricism, The Works of William James* (Cambridge, MA: Harvard University Press, 1976 [1912]) p. xxviii.

⁹⁹ James, *Meaning of Truth*, p.826.

¹⁰⁰ James, ‘World of Pure Experience’, p.1160.

¹⁰¹ Hume, *Treatise of Human Nature*, p.678 (Appendix). Original emphasis.

own right a concatenated or continuous structure.’¹⁰² This may seem to suggest that experience would be such a flux that all aspiration to truth would be vain. In subsections 7.7.2 and 7.7.3, directly following, I will discuss the practical ramifications of James’s radical empiricism, beginning with this wild aspect of experience.

7.7.2 Percepts and Concepts

James wrote that a baby, ‘assailed by eyes, ears, nose, skin, and entrails at once, feels it all as one great blooming, buzzing confusion’¹⁰³ Flanagan contended that James’s ‘greatness as a philosopher and as a person comes from allowing this “blooming, buzzing confusion” to continually present itself to himself.’¹⁰⁴ It is a complexity that manifested, for James, both in the microcosm of individual sensory experience, and in the macrocosm of an unfolding universe:

The real world as it is given at this moment is the sum total of all its beings and events now. But can we think of such a sum? Can we realize for an instant what a cross-section of all existence at a definite point of time would be? While I talk and the flies buzz, a sea gull catches a fish at the mouth of the Amazon, a tree falls in the Adirondack wilderness, a man sneezes in Germany, a horse dies in Tartary, and twins are born in France. What does that mean? Does the contemporaneity of these events with each other and with a million more as disjointed as they form a rational bond between them, and unite them into anything that means for us a world? Yet just such a collateral contemporaneity, and nothing else, is the *real* order of the world.¹⁰⁵

The complexity of experience was further compounded, for James, by the ephemeral, perpetually transmuting, nature of experience. This can be illustrated through James’s description of radical empiricism as a ‘mosaic philosophy’, where each piece of the mosaic is a moment of experience - with the caveat that, to be accurate, the analogy would have to include the fact that

the more substantive and the more transitive parts run into each other continuously, there is in general no separateness needing to be overcome by an external cement... Experience itself,

¹⁰² James, *Meaning of Truth*, p.826.

¹⁰³ James, *Principles of Psychology* Vol. I, p. 488.

¹⁰⁴ Owen Flanagan, ‘Consciousness as a Pragmatist Views It’, in: Ruth Anna Putnam (ed.), *The Cambridge Companion to William James* (Cambridge: Cambridge University Press, 1997), p. 47

¹⁰⁵ William James, ‘Reflex Action and Theism’, in: William James, Gerald E. Myers (ed.), *William James: Writings 1878 – 1899* (New York, NY: The Library of America, 1992 [1881]) p. 546.

taken at large, can grow by its edges... one moment of it proliferates into the next by transitions which, whether conjunctive or disjunctive, continue the experiential tissue.¹⁰⁶

The significant point for the present enquiry is that the complexity of the world subsists, not only in the sheer volume of disparate phenomena, but also in the fact that experience is forever transmuting; and human beings are not equipped to understand such a world without mediation. Hence, as James put it, 'It is an order with which we have nothing to do but to get away from it as fast as possible.'¹⁰⁷ In describing what he meant when he spoke of getting away from the chaos of sensory experience, James went on to speak of how concepts are imposed upon the world:

we break it: we break it into histories, and we break it into arts, and we break it into sciences; and then we begin to feel at home. We make ten thousand separate serial orders of it. On any one of these, we may react as if the rest did not exist. We discover among its parts regulations that were never given to sense at all, - mathematical relations, tangents, squares, and roots and logarithmic functions, - and out of an infinite number of these we call certain ones essential and lawgiving, and ignore the rest.¹⁰⁸

In James's thought, 'percepts are singulars that change incessantly and never return exactly as they were before. This brings an element of concrete novelty into our experience. This novelty finds no representation in the conceptual method...'¹⁰⁹

Concepts 'are post-mortem preparations, sufficient only for retrospective understanding; and when we use them to define the universe prospectively we ought to realize that they can give only a bare abstract outline or approximate sketch, in the filling out of which perception must be invoked.'¹¹⁰ For James, 'Percepts and concepts interpenetrate and melt together, impregnate and fertilize each other. Neither, taken alone, knows reality in its completeness. We need them both, as we need both our legs to walk with.'¹¹¹

James acknowledged that such an approach could seem to be a retrograde step.

Summing up his position (whilst also acknowledging the influence Henri Bergson's philosophy had on him in the last eight years of his life), he wrote:

¹⁰⁶ James, 'World of Pure Experience, pp. 1180 – 1.

¹⁰⁷ James, 'Reflex Action and Theism', p. 546.

¹⁰⁸ James, 'Reflex Action and Theism', p. 546.

¹⁰⁹ James, *Some Problems of Philosophy*, p. 1033

¹¹⁰ James, *Some Problems of Philosophy*, p. 1033.

¹¹¹ James, *Some Problems of Philosophy*, p. 1010

We are so subject to the philosophic tradition which treats logos or discursive thought generally as the sole avenue to truth, that to fall back on raw unverbilized life as more of a revealer, and to think of concepts as the merely practical things which Bergson calls them, comes very hard. It is putting off our proud maturity of mind and becoming again as foolish little children in the eyes of reason. But difficult as such a revolution is, there is no other way, I believe, to the possession of reality...¹¹²

Thus far in this discussion of radical empiricism there has been nothing that would preclude the Peircean conclusion that – in the face of a wild and unknowable reality – the wisest course is for philosophy to cede epistemological authority to science. The issue on which James’s thought departs from that of Peirce emerges in the next subsection.

7.7.3 Personal Responsiveness as a Quality of the Given Order

As has already been seen, James regarded contemporary science as extremely useful; his only quarrel was with the claims sometimes made by its advocates that it held a monopoly on truth. He characterised his philosophy as opposed to the view that ‘Reality... stands ready-made and complete, and our intellects supervene with the one simple duty of describing it as it is already.’¹¹³ The pragmatist conception – in James’s account – was that ‘The world stands really malleable, waiting to receive its final touches at our hands. Like the kingdom of heaven, it suffers human violence willingly. Man engenders truths upon it.’¹¹⁴ This is a corollary of James’s pluralistic pantheism, discussed in the preceding chapter of this thesis – the individual cannot ultimately be separated from the universe in which (s)he lives. Hence, in Barnard’s words, ‘What James did was to claim that the connectivity that is present within our consciousness is not limited to the confines of our consciousness, but is also an inherent ontological quality of the universe itself.’¹¹⁵

If this is extrapolated to astrology, it portrays a basis upon which astrology-as-divination could function, with the various (apparently incompatible) methodologies of

¹¹² James, *Pluralistic Universe*, p.755. The influence of Bergson on James is discussed at, e.g., Richardson, *William James: in the Maelstrom*, pp.425-8.

¹¹³ James, *Pragmatism*, p. 599.

¹¹⁴ James, *Pragmatism*, p.599.

¹¹⁵ Barnard, *Exploring Unseen Worlds*, p. 139

astrologers eliciting more or less equally effective responses from the cosmos because ‘the miracle of miracles, a miracle not yet exhaustively cleared up by any philosophy, is that the given order lends itself to...remodelling. It shows itself plastic to many of our scientific, to many of our æsthetic, to many of our practical purposes and ends.’¹¹⁶

It may seem at this point as though James’s approach would inevitably lead to a relativistic approach wherein ‘truth’ would be an entirely individual matter. But he was also aware of, and strove to preclude, this eventuality, remarking on ‘the presence of resisting factors in every actual experience of truth-making, of which the new-made special truth must take account, and with which it perforce has to “agree”.’¹¹⁷ For James, ‘there is something in every experience that escapes our arbitrary control... There is a push, an urgency, within our experience, against which we are on the whole powerless...’¹¹⁸ Barnard summarised James’s position: ‘we discover the world as much as much as we create it... the world seems to come to us containing certain inherent tendencies, patterns, and consistencies.’¹¹⁹

The participatory relationship between an individual and the world in which they live is, therefore, central to James’s epistemology. For James, as Knapp puts it, ‘One half of knowing was grounded in personal experience... because knowledge manifested an irreducible subjective quality. That is, reaching objective knowledge of any given phenomenon depended to a degree on how any one individual actually experienced it.’¹²⁰ From this it follows that there can be no absolute distinction between ontology and epistemology; the only basis we have for talking of how things are, is the stream of experience which is inherently non-dual – ‘pure experience’ to use James’s term. Radical empiricism is therefore both epistemology and ontology. On this basis James argued that science should not be regarded as having supplanted divination: he contended that ‘the verdict of pure insanity, of gratuitous preference for error, of superstition without an excuse, which the scientists of our day are led by their intellectual training to pronounce upon the entire thought of the past, is a most shallow

¹¹⁶ James, ‘Reflex Action and Theism’, p. 546.

¹¹⁷ James, *Pragmatism*, p. 593.

¹¹⁸ James, *Meaning of Truth*, p.865.

¹¹⁹ Barnard, *Exploring Unseen Worlds*, p.125.

¹²⁰ Knapp, *William James: Psychological Research*, p. 175.

verdict.’¹²¹ And amongst the ‘thought of the past’ he included the belief ‘that events may happen for the sake of their personal significance... the notions of our grandfathers about oracles and omens, divinations and apparitions, miraculous changes of heart and wonders worked by inspired persons, answers to prayer and providential leadings’.¹²² Support may be taken therefore, from James’s thought, for the possibility that astrology-as-divination could be true.

What has been presented thus far has been a primarily theoretical outline of radical empiricism. In the next two sub-sections I will present some practical applications which illustrate the relevance of radical empiricism to astrology.

7.7.4 The Mind-Cure

James used, and advocated, what he dubbed the ‘Mind-cure’ – also known as ‘New Thought’, a movement primarily shaped by Phineas Quimby (1802 – 66).¹²³ James characterised it as having at its core a ‘belief in the all-saving power of healthy-minded attitudes as such, in the conquering efficacy of courage, hope, and trust, and a correlative contempt for doubt, fear, worry, and all nervously precautionary states of mind.’¹²⁴ Mary Baker Eddy (1821 – 1910) was a patient of Quimby and her ‘Christian Science’ was influenced by his approach.¹²⁵ The movement was popularised in the twentieth century by writers such as Dale Carnegie (1888 – 1955) and Norman Vincent Peale (1898 – 1993). Both Carnegie and Peale discussed William James’s presentation of the ‘Mind-cure’ in their works, and the title of Peale’s book *The Power of Positive Thinking* supplied the term by which the movement is now probably best known.¹²⁶

¹²¹ James, ‘What Psychological Research Has Accomplished’, p. 699.

¹²² James, ‘What Psychological Research Has Accomplished’, p. 698. Original emphasis.

¹²³ James put forward the term ‘Mind-cure’, and advocated its basic principles, in: *Varieties of Religious Experience*, p. 94, and pp. 94 – 7 respectively.

¹²⁴ James, *Varieties of Religious Experience*, pp.94 – 5; James described the ‘doctrinal sources’ of the movement at p.94.

¹²⁵ The connection between Eddy and Quimby is discussed e.g. at James A. Herrick, *The Making of the New Spirituality: The Eclipse of the Western Religious Tradition* (Downers Grove, IL: InterVarsity Press, 2003) pp. 90 – 1. James occasionally cited Eddy as a protagonist of the Mind-cure, e.g. *Varieties of Religious Experience* p. 106.

¹²⁶ For the Mind-cure’s equivalence to positive thinking, see e.g.: George Cotkin, *William James: Public Philosopher* (Baltimore: Johns Hopkins University Press, 1990) p.113

James twice argued in public fora, in 1894 and 1898, against proposed legislature in Massachusetts that would have made it illegal to practise the Mind-cure.¹²⁷ As Donald F. Duclow observed, James was motivated to involve himself in this way largely from concern that whilst the Mind-cure was genuinely helping people, ‘medical regulars denounced these methods without bothering to consider the evidence.’¹²⁸ This illustrates the primacy he assigned to pragmatic considerations in evaluations of self-help practices that lacked the imprimatur of science. For the present thesis, the question naturally arises whether a Jamesian case for practising astrology could reasonably be extrapolated from this. Whilst – as is evident by now – there are many elements in James’s thought that are congenial to astrology, the extrapolation is by no means certain. For instance, regarding the Mind-cure practitioners, James wrote: ‘I am not fond and cannot understand a word of their jargon except their precept of assuming yourself well and claiming health rather than sickness which I am sure is magnificent.’¹²⁹ It seems likely on this basis that, had he evaluated astrology, his focus would have been on its impact on the lives of individuals – an issue to which I will return in section 7.8.2 below.

James suffered from depression – albeit, as Richardson remarked, ‘a kind of depression... that can be accompanied by a paradoxical but real gain in insight.’¹³⁰ His belief in the mind-cure was therefore a matter of direct personal evaluation. He summed it up as follows:

Live as if I were true, she says, and every day will practically prove you right. That the controlling energies of nature are personal, that your own personal thoughts are forces, that the powers of the universe will directly respond to your individual appeals and needs, are propositions which your whole bodily and mental experience will verify.¹³¹

¹²⁷ Donald F. Duclow, ‘William James, Mind-Cure, and the Religion of Healthy-Mindedness’, *Journal of Religion and Health* Vol. 41 No. 1 (Spring 2002) pp. 46 – 8.

¹²⁸ Duclow, ‘William James, Mind-Cure’, p. 48.

¹²⁹ William James, letters to Dr. James J. Putnam (2nd, 3rd and 4th March 1898), in: William James; Frederick H. Burkhardt, Fredson Bowers, Ignas K. Skrupskelis (eds.), *Essays, Comments, and Reviews (The Works of William James)* (Cambridge, Mass: Harvard University Press, 1987), pp. 657-8. Cited by Duclow, ‘William James, Mind-Cure’, p. 48.

¹³⁰ Richardson, *William James: in the Maelstrom*, p. 539 n. 9. James’s experiences of depression are further discussed by Richardson at: p. 80, p. 83, p. 86, p. 88, p. 89, p. 145, p. 149, p. 156, p. 279, p. 340.

¹³¹ James, *Varieties of Religious Experience*, p.119.

This is an account of intimacy – in James’s sense, developed in the previous chapter – with a responsive cosmos, which is to say that it is substantially the same model as that on which astrology-as-divination is predicated.¹³²

Protagonists and critics of astrology often agree that positive thinking is relevant to astrology, but disagree why that is the case. In listing the reasoning errors which might account for astrology seeming to work, Dean et al included positive thinking and equated it to ‘the Pollyanna principle’.¹³³ According to the ‘Pollyanna Principle’, ‘We typically process pleasant items more accurately and efficiently than unpleasant or neutral items, and we tend to make positive judgments about a wide variety of people, events, situations, and objects.’¹³⁴

This is not the same as positive thinking, or the Mind-cure, as James defined it. The idea behind positive thinking is that a positive attitude helps to *create* positive outcomes, whereas the Pollyanna Principle amounts only to misremembering. The conflation of the two presupposes an absolute distinction between subjective and objective, discussed in section 7.5 above, which is precisely what is challenged by James’s radical empiricism. This issue is explored further, with a change of examples, in the following section.

7.7.5 Psi, Magic and the Placebo Effect

There is considerable overlap in the definitions of psi, magic, and the placebo effect. In the previous chapter I cited Krippner’s definition of psi phenomena as (in part) ‘organism-environment interactions in which... information or influence has occurred that can not be explained through science’s understanding of sensory-motor channels.’¹³⁵ Dennis D. Carpenter commented, ‘This definition of psi phenomena can

¹³² The term ‘responsive cosmos’ is used in the sense given to it by Brockbank, as discussed in chapter 3 of this thesis: Brockbank, *Responsive Cosmos*, pp. 212 – 3.)

¹³³ Dean et al in: Phillipson, *Astrology Year Zero*, p. 136.

¹³⁴ Margaret W. Matlin, ‘Pollyanna Principle’ Rüdiger F. Pohl, *Cognitive Illusions: Intriguing Phenomena in Thinking, Judgment and Memory*, 2nd edn. (Abingdon: Routledge, 2017) p. 315. The principle was first advanced in: Margaret W. Matlin, David J. Stang, *The Pollyanna Principle: Selectivity in Language, Memory and Thought* (Cambridge, MA: Schenkman Publishing, 1978).

¹³⁵ Krippner, ‘Parapsychology and Postmodern Science’, p. 132.

also be regarded as an appropriate description of magic as I understand it.’¹³⁶ In an attack on James’s pragmatic thought, which he regarded as leading to subjectivism, and in particular on James’s use of ‘satisfaction’ as a criterion of truth, Durkheim described a magic ritual:

The initial idea may be false, and yet satisfaction nevertheless be obtained. Let us suppose, for example, that a sane man has been persuaded that the physical distress he is afflicted with is due to the fact that evil spirits have entered into his body (a case which is common in certain primitive societies). He is given an unpleasant substance which, he is assured, will drive away the spirits which are tormenting him. He believes this, and is cured. The result is certainly the one expected, and is even the ‘suitable’ one. Nevertheless, the idea was false.¹³⁷

Durkheim’s conclusion can be compared to Smit’s analysis of astrology as a practice which works, but which is not true. As a critique of James’s thought, it exemplifies the failing (previously remarked in Ayer’s analysis) that the notion of an independently-existing material reality is smuggled in and James’s thought – which would deny that such a thing exists in the first place – disproved thereby. A relevant term here is the placebo effect, whereby ‘the patient’s belief in the effectiveness of a drug or treatment often brings about a cure or improvement in itself’.¹³⁸ Durkheim’s description, above, characterised the ritual to expel evil spirits as – in effect – a placebo.

Although James did not write about the placebo effect by name, it can be seen as an aspect of the Mind-cure’s emphasis on the power of mind. Further, a passage from a letter he wrote in 1864 – when he was training to be a medical doctor – shows sympathy for the underlying idea. Of his medical training he wrote, ‘My first impressions are that there is much humbug therein, and that, with the exception of surgery, in which something positive is sometimes accomplished, a doctor does more by the moral effect of his presence on the patient and the family, than by anything else.’¹³⁹ The professor of bioethics Franklin G. Miller has suggested that ‘[James’s] psychology and

¹³⁶ Dennis D. Carpenter, ‘Emergent Nature Spirituality’ in James R. Lewis (ed.), *Magical Religion and Modern Witchcraft* (Albany, NY: State University of New York Press, 1996) p. 59.

¹³⁷ Emile Durkheim, John B. Allcock (tr.), *Pragmatism and Sociology* (Cambridge University Press, 1983), p.49.

¹³⁸ Roger Squires, ‘Placebo’ in: Ted Honderich (ed.), *The Oxford Companion to Philosophy* (Oxford: Oxford University Press, 1995) p. 682.

¹³⁹ William James – letter written 21st February 1864 (recipient not stated), cited in: Ralph Barton Perry, *The Thought and Character of William James* Vol. 1 (Boston, Mass: Little, Brown, and Company, 1935), p. 216.

philosophy are remarkably well suited for elucidating the placebo effect and its implications for medicine'.¹⁴⁰

The idea of astrology as a placebo is sometimes used by critics of astrology. Thus Dean gave the placebo effect – which he defined as ‘it does us good if we think it does’ – as one of numerous ‘reasoning errors’ that lead to and perpetuate belief in astrology.¹⁴¹ Culver and Ianna suggested that ‘the placebo effect can work in astrology. Just as taking a harmless sugar pill may “cure” an illness if you think you are taking the proper drug, believing astrology works may lead to beneficial good feeling in the client.’¹⁴²

In a similar way to that seen in the previous section in the conflation of positive thinking and the Pollyanna effect, the contentions of Dean, and Culver and Ianna, presuppose the validity of an absolute split between ‘subjective’ and ‘objective’ and use the placebo effect as a synonym for the former, even though it might be seen as undermining any such distinction. For so long as it is accepted that the placebo effect belongs only on the side of the mind and the subjective, the impact of the term in a discussion of astrology is only to provide a synonym for ‘subjective astrology’. However, the placebo effect underscores the contentious nature of any distinction between subjective and objective and in this capacity provides a precedent in scientific analysis for James’s suggestion that the subjective and the objective are not ultimately separable. Hence Harrington’s remark:

The problems raised for medicine by placebo phenomena... are not only ethical: they are also epistemological. Placebos are the ghosts that haunt our house of biomedical objectivity, the creatures that rise up from the dark and expose the paradoxes and fissures in our own self-created definitions of the real and active factors in treatment.¹⁴³

This perspective is supported by Drs. Daniel E. Moerman and Wayne B. Jonas’s contention that ‘the most recent serious attempt to try logically to define the placebo effect failed utterly’, and suggestion that a recent attempt at a rigorous definition ‘makes

¹⁴⁰ Franklin G. Miller, ‘William James, Faith, and the Placebo Effect’, *Perspectives in Biology and Medicine* Vol. 48 No.2 (Spring 2005), p. 273.

¹⁴¹ Dean et al in Phillipson, *Astrology Year Zero*, p.136; Dean used the same words to define the placebo effect in: ‘Does Astrology Need to be True? (Part 2)’, p.263, which was subsequently cited in: Kelly, Dean & Saklofske, ‘Astrology: Critical Review’, p.59.

¹⁴² Culver and Ianna, *Astrology: True or False?*, p.220.

¹⁴³ Anne Harrington, ‘Introduction’ in Anne Harrington (ed.), *The Placebo Effect: Interdisciplinary Exploration* (Cambridge, Mass: Harvard University, 1997), p.1.

no sense whatsoever. Indeed, it flies in the face of the obvious' insofar as its central concept is an effect produced by something which supposedly cannot have any effect.¹⁴⁴

The relevance, to divination, of the puzzle posed by the placebo emerged in a discussion by C. A. Meier (1905 – 1995). He remarked that 'It seems unintelligible to us how the psyche can produce an arrangement in the *physis*, no matter whether the *physis* is *intra corpus* (cf. psychosomatic symptoms) or *extra corpus*, i.e. whether it is part of the subject or not.'¹⁴⁵ He went on to give as an example of the latter type (i.e. the mind of the individual affecting physical objects outside the individual's body) 'all forms of divination', with the specific example of the I Ching where it might be assumed that the psyche somehow influenced the fall of the yarrow stalks in order to create a specific hexagram.¹⁴⁶ Meier however found such causal explanations inadequate as a way of understanding either divination or the mind-body relationship in medicine, and therefore suggested that 'in view of the failure of causal explanations, the psycho-physical functioning should be interpreted synchronistically'.¹⁴⁷

The dilemma raised by placebo phenomena is therefore, in Meier's view, a part of the greater dilemma of how mind and matter – were they entirely disparate – could interact at all. This issue was epitomised by Kant when he remarked, 'that my will moves my arm is not more intelligible to me than if somebody said to me that he could stop the moon in his orbit'.¹⁴⁸ Such a mind/matter dichotomy was challenged – as discussed in the previous chapter – by James's conception of 'pure experience' and Jung's '*unus mundus*', both of which deny ontological validity to such a dichotomy. In Meier's analysis therefore there is a connection between placebo phenomena and divination, in that both of them can and should be understood as manifestations of synchronicity. This would require an understanding of synchronicity as more ubiquitous than Jung generally intended. Thus, in reporting his discussions with Meier, Jung remarked that 'the relation between body and soul may yet be understood as a synchronistic one.

¹⁴⁴ Daniel E. Moerman and Wayne B. Jonas, 'Deconstructing the Placebo Effect and Finding the Meaning Response', *Annals of Internal Medicine* Vol. 136, No.6 (19 March 2002), p. 471. My thanks to Nicola Smuts-Allsop for introducing me to Moerman and Jonas's paper.

¹⁴⁵ C. A. Meier, 'Psychosomatic Medicine from the Jungian Point of View', *Analytical Psychology* Vol. 8 No. 2 (July 1963) p. 111.

¹⁴⁶ Meier, 'Psychosomatic Medicine', p. 113.

¹⁴⁷ Meier, 'Psychosomatic Medicine', p. 113.

¹⁴⁸ Immanuel Kant; Emanuel F. Goerwitz (tr.), Frank Sewall (ed.), *Kant's Dreams of a Spirit Seer, Illustrated by Dreams of Metaphysics* (London: Swan Sonnenschein, 1900 [1766]) p. 117

Should this conjecture ever be proved, my present view that synchronicity is a relatively rare phenomenon would have to be corrected.’¹⁴⁹ Both senses of ‘synchronicity’ can be accommodated within James’s philosophy, with the sense of occasional subjectively significant happenings manifesting what he termed ‘providence’ and the underlying non-duality being ‘pure experience’.

In summary, James’s philosophy of radical empiricism is an approach which can highlight and resolve issues faced by dualistic philosophies. This is potentially a congenial context for an understanding of astrology-as-divination, which – under James’s pragmatic definition of truth – could then be judged true if and to the extent that it worked. This evokes the question of whether, in fact, astrology works.

7.8 Does Astrology Work?

In this section I will consider two issues which challenge the assertion that astrology works, and could therefore preclude any deduction along the lines that astrology is true because it works. In section 7.8.1 I will look at the possibility that if something works, it would not be accurate to call it astrology. In section 7.8.2 I will discuss the question, if and how astrology can be useful in the life of an individual.

7.8.1 The Planet Question and ‘Wrong Charts’

Curry’s definition of astrology, cited in chapter one and in section 7.5 above, refers to ‘the practice of relating the heavenly bodies to lives and events on earth...’.¹⁵⁰ In the previous chapter, Ertel’s suggestion was considered – that when astrology seems to work, this should be attributed to ‘paranormal intuitions of psi-gifted astrologers.’¹⁵¹ The contentions of Rollo May and Thomas Moore, cited earlier, that astrology is – respectively – a ‘myth’ and ‘a form of imagination’ have a similar consequence, namely, that whatever it is that works has only a tenuous relationship to astrology.¹⁵² If the actual astronomical locations of heavenly bodies for the time(s) under consideration

¹⁴⁹ C. G. Jung, ‘Synchronicity: An Acausal Connecting Principle’, p. 500 [para 938] n.70

¹⁵⁰ Curry, ‘Astrology’ in *Encyclopaedia of Historians*, p.55.

¹⁵¹ Ertel, ‘Appraisal of Shawn Carlson’, p. 134.

¹⁵² May, *Cry for Myth*, p.22 n.1; Moore, *Re-Enchantment of Everyday Life*, p. 317.

are not involved, then it can reasonably be asked whether – under Curry’s definition – whatever it is that works, is astrology.

This question is brought into sharp focus by the common experience amongst astrologers of finding after an accurate and well-received horoscopic reading that a ‘wrong chart’ had been used – that is, a chart calculated for a time or date which did not belong to the astrological client. Rudolf Smit had an experience of this type, where he gave a successful reading to a client and then found that he had used the wrong person’s chart. He cited the experience as one that encouraged him to begin questioning the truth of astrology.¹⁵³ Similarly, David Hamblin gave a successful reading for a client, who subsequently realised that he had been born in a different year.¹⁵⁴ As was the case with Smit, this caused Hamblin to question the truth of astrology. In a recent thesis, Keith Burke cited the ‘wrong chart’ experience of Hamblin and a similar one for Peter Niehenke (involving a successful interpretation based on a chart with an error of 20 years in the birth date) and then added, ‘I had the same “wrong chart” experience’.¹⁵⁵ Further examples could be adduced and in fact the experience is sufficiently ubiquitous that Cornelius, after describing a ‘wrong chart’ experience of his own asked, ‘Which astrologer is there who has *not* had this experience, or one very similar?’¹⁵⁶ A similar estimate of the experience’s frequency came from Alie Bird who argued that

astrology’s inherent magic really comes to the fore in cases where what later transpires to have been the ‘wrong’ chart works; not only works, but works far, far better than the ‘right’ chart would have done. I would suggest that all experienced astrologers have examples of this phenomenon in their portfolios.¹⁵⁷

Bird went on to comment on how the ‘wrong chart’ issue divides astrologers. She remarked that it has become ‘an adjunct to the “astrology is divination” camp; never will it be openly acknowledged in the “astrology is an unproved science” group’.¹⁵⁸ The problem posed by these cases brings into focus the two perspectives to which I

¹⁵³ Smit, *Astrology My Passion*.

¹⁵⁴ David Hamblin in: Phillipson, *Astrology Year Zero*, p. 120.

¹⁵⁵ Keith Burke, *Big Five Personality Traits and Astrology: The Relationship Between the Moon Variable and the Neo PI-R* (PhD thesis, Pacifica Graduate Institute, 2012) p. 8; Peter Niehenke, ‘The Whole is More than the Sum of its Parts’, *Astro-Psychological Problems* Vol. 1 No. 2, p. 37.

¹⁵⁶ Cornelius, *Moment of Astrology*, p. 230. Original emphasis.

¹⁵⁷ Bird, *Astrology in Education*, p. 147.

¹⁵⁸ Bird, *Astrology in Education*, p. 148.

have returned throughout this thesis, astrology-as-divination and astrology-as-science. The polarisation between these options has at its heart a disagreement on what it means to say that astrology works, and therefore how and if astrology is true. In chapter 2 of this thesis I cited Cornelius's contention that 'the horoscopes we work with are not astronomical records of an event in the physical world. They are symbols in a world of human significance.'¹⁵⁹ By distancing horoscopy from astronomy, he thereby opened up the theoretical possibility that a 'wrong chart' could work – insofar as a wrong chart could still be a collection of symbols in a world of human significance. This raises the question of whether – if this approach works – it would follow that astrology worked, and was therefore pragmatically true. It is by no means clear that, in such a case, the heavenly bodies are being related to life on Earth. If they are not, Curry's definition of 'astrology' would not be met, and it would be necessary to take the position proposed by Ertel – that what transpires when 'astrology' is practised would be more accurately described as psi.¹⁶⁰

Although the possible validity of 'wrong charts' tends to undermine the scientific ideal of one-to-one correspondences between astronomical events and life on Earth, it does not necessarily destroy all such relationship. When I interviewed Cornelius I questioned whether astrology would work as well if astrological software created randomised locations for planets, rather than calculating astronomically accurate positions for a given time. He acknowledged that there was some basis for the question, given that astrologers 'get correct readings from wrong maps, on sufficient occasions for it to be, clearly, an astrological phenomenon.'¹⁶¹ He did not, however, think that a randomised approach would ultimately be effective:

it is so ruthlessly undermining of the status of astrology that it can become an unskilful means – as if we could just pick a moment in an ephemeris, and that would be as true as a genuine horary moment that has come to us; no, it is not. But the genuine horary moment that comes to us hasn't become true because of physical planets at a certain time and space, either. It's subtle!¹⁶²

¹⁵⁹ Cornelius, *Moment of Astrology*, p.253.

¹⁶⁰ Ertel, 'Appraisal of Shawn Carlson', p. 134 (cited and discussed in the previous chapter of this thesis).

¹⁶¹ Geoffrey Cornelius – Interview with Garry Phillipson (10th July 1998, with minor revisions October 2010): www.astrozero.co.uk/geoffrey_cornelius_interview.pdf (checked 1st March 2019).

¹⁶² Geoffrey Cornelius – Interview with Garry Phillipson (10th July 1998, with minor revisions October 2010): www.astrozero.co.uk/geoffrey_cornelius_interview.pdf (checked 1st March 2019).

Cornelius went on to refer to ‘the ritual of *attending* the world around us, which is given in the physical planets, and the ephemeris, and the time and space.’¹⁶³ The idea of a ritual component in astrology, which brings its own requirements, was also put forward by Curry when he argued:

The astrologer’s work would be impossible without a notion of truth that is ultimately as demanding and precise, and potentially possesses as much integrity in his or her own sphere, as the corresponding notion for scientists in theirs. And the attempt to work with the appropriate kind of accurate data is as much, and as important, a requirement for astrologers as it is for scientific experimentation. But... it is a *ritual* requirement.¹⁶⁴

This perspective is compatible with James’s philosophy, wherein the mental orientation and mental actions of the individual play a co-creative role in shaping reality as it unfolds – ‘co-creative’ because, as cited in section 7.7.3, ‘the world seems to come to us containing certain inherent tendencies, patterns, and consistencies.’¹⁶⁵ The practical consequences of this for an astrologer can be illustrated through Bernard Eccles’s perspective:

a wrong chart, if it is not known to be wrong, will yield very valid astrology, excellent symbolism, and indeed predictive qualities – until the very second that you discover it’s the wrong chart, calculated for three years too soon or whatever. At that point your ‘wrong chart’ collapses, and your next chart springs into being – and can be read from that point forwards.¹⁶⁶

This is supported by the experience the astrologer Judy Hall described in her interview. She reported that she had used a birth time for herself for almost thirty years that turned out to be wrong by about two hours. She continued, ‘I have to say that the first chart ‘fitted’ my experience up to that point, and the second my experiences since. This is something I cannot explain. It doesn’t make me doubt but it does incline me towards the divination theory rather than the scientific one.’¹⁶⁷

The consequence of this discussion is that the quality of responsiveness that is sometimes attributed to the universe in explaining astrology is pervasive, so that – for

¹⁶³ Geoffrey Cornelius – Interview with Garry Phillipson (10th July 1998, with minor revisions October 2010): www.astrozero.co.uk/geoffrey_cornelius_interview.pdf (checked 1st March 2019).

¹⁶⁴ Curry in Willis and Curry, *Astrology Science and Culture*, p.100.

¹⁶⁵ Barnard, *Exploring Unreal Worlds*, p.125.

¹⁶⁶ Bernard Eccles, interview, 2005.

¹⁶⁷ Judy Hall interview, 2005.

instance – the fact of an astrologer miscalculating a chart or being in a bad mood would be subsumed within the astrological process. In this way the subjective involvement and attitude of the astrologer, far from being something to be eliminated before astrology could be assessed, would be an integral part of astrology.

This was believed to be the case by at least some astrologers before astrology-as-science had become the dominant paradigm in the west. For instance, William Lilly advised the ‘student in astrology’ that ‘... the more holy thou art; and more near to God, the purer Judgement thou shalt give.’¹⁶⁸ Guido Bonatti (C13th CE) wrote that before approaching an astrologer, a person ‘ought to pray to the Lord God... that it should fall to him to reach to an understanding of the truth of those things about which he intends to ask’; further, the intention to ask should be something which ‘he retains in his heart for a day and a night (or more), not touched by just any motion of the mind’.¹⁶⁹

Such beliefs were in evidence amongst some of the astrologers I interviewed. For instance Jessica Adams said of her preparations to write her Sun-sign columns for *Cosmopolitan* magazine, ‘I absolutely, sincerely, commit myself to every single line that I write: I light a candle, ring a Tibetan temple bell and ask for assistance from Tara, who is the Tibetan goddess of compassion.’¹⁷⁰ She added that her approach is ‘basically influenced by what I learned about the way Lilly worked’.¹⁷¹ Nicola Smuts-Allsop told me ‘I have noticed that the more serious the question, the more pure the intent, the more close to the heart it is, and the more relevant and meaningful it is to the person, the better my reading, the more meaningful the interchange.’¹⁷² On the issue of wrong charts, Smuts-Allsop said,

I don’t particularly have a problem with the ‘wrong chart’ issue at all. Because I believe that there are actually three people in the room – there’s you, me, and God and it doesn’t actually matter what chart you give me, so long as I believe it’s the right chart, I’ll work with any chart. So when people ring me up and say, ‘I’m not sure when I was born...’ I say, ‘Pick a time and don’t round it off’. That focuses them, and I then use that time. I come from South Africa,

¹⁶⁸ Lilly, *Christian Astrology*, p. xv (“To the Student in Astrology”).

¹⁶⁹ Guido Bonatti, Benjamin N. Dykes (tr.), *The Book of Astronomy* (Golden Valley, MN: Cazimi Press, 2007 [completed between 1276 and 1296 – ref. Dykes’s introduction, pp. xliii – xliv; versions from which the 2007 translation was made were 1491 and 1550 – ref. Dykes’s introduction p. xxxi) p. 265

¹⁷⁰ Jessica Adams, interview, 2005.

¹⁷¹ Jessica Adams, interview, 2005.

¹⁷² Nicola Smuts-Allsop, interview, 2006.

where we have a strong feeling for astrology as divination, and not as an empirical science, and we are brought up in a cultural milieu where people read omens in the throwing of bones or in chicken entrails. So the idea that a chart, too, is an *omen* is not foreign to me.¹⁷³

This integration of momentary thought and circumstance into interpretation may be considered to subsist in the basic concept of horary astrology. Horary, introduced in chapter 2 of this thesis, is based on the assumption that a horoscope drawn for the time and place at which a question comes to an astrologer's attention will contain relevant guidance. The position that seems to emerge here with regard to 'wrong charts' is that a responsive, providential cosmos might at times interpolate into the life of astrologer and client a chart which is astronomically wrong, but appropriate in terms of meaning. And that this possibility coexists with, rather than supplanting, the significance of astronomical bodies as they are actually positioned.

John Frawley once wrote that 'it is an inescapable consequence of the very premises of horary that the judgment given will be the right one, whether it be 'correct' or not. What happens happens.'¹⁷⁴ I asked him to elucidate, and he replied:

If the q[uestion] can fall only at its appropriate time, it must fall also at its appropriate place - i.e. onto the head of the appropriate astrologer in whatever state of good or bad form he is in at that moment. As Al-Ghazali says... every raindrop has its own angel appointed to guide it to its destined place (i.e. the essence of the life of that thing, whether a raindrop or a question or a human, can unfold only as it is destined to unfold).¹⁷⁵

¹⁷³ Nicola Smuts-Allsop, interview, 2006.

¹⁷⁴ Frawley, 'Neptunia Replies' in *The Astrologer's Apprentice* No.17 (2000), p. 45.

¹⁷⁵ John Frawley, email to the author, 18 September 2004, quoted with permission. I have so far not been able to trace the quotation to Al-Ghazali. Compare, however: 'an angel has been given charge of every single thing. Mustafa alluded to this when he said, "An angel comes down with every drop of rain."' – unknown author, suspected by Chittick to be Naṣīr al-Dīn Qūnawī, 'The Rising Places of Faith' c. 1252, in: William C. Chittick (ed. & tr.), *Faith and Practice of Islam – Three Thirteenth Century Sufi Texts* (Lahore, Pakistan: Suhail Academy, 2000) p.45, and see also p.76, p.192 n. 45.2. See p.xi for Chittick's comments on the likely authorship of the text. And compare also a mid-17th century text: 'The second order of angels are the ministers of bodies and gigantic forms, the revolution of the heavens is their office; and with every drop of rain an angel comes down, and no leaf appears without an angel fostering it.' Moshan Fání (tr. David Shea and Anthony Troyer) *The Dabistán or School of Manners* (aka *Dabestān-e Mazāheb*) (New York: M. Walter Dunne, 1901) p.317.

Cornelius articulated a similar position when he wrote of astrologers' 'trust in the nature of reality', contending that 'Astrologers have an innate trust that what is shown and understood, is good to be shown and understood.'¹⁷⁶

Under the account of astrology-as-divination presented here, the relationship of the planets to life on Earth would not be the one-to-one correspondence between planet and event, or character trait, that many astrological clients, and indeed astrologers, might assume to be the case. It would not qualify as astrology under the definitions of some commentators – for instance the definition of David Pingree already cited in chapter 1 of this thesis, that 'astrology' entails the idea that 'the planets, in their eternal rotations about the earth, transmit motion (change) to the four elements and to the assemblages of elements, animate and inanimate, in the sublunar world.'¹⁷⁷ If astrology is defined in this way – by a causal connection between horoscopic bodies and life on Earth – then what I have described as astrology-as-divination would not qualify as astrology. Under such a definition, it would be entirely within the competence of science to evaluate whether or not astrology worked and was therefore true. In this thesis I have taken an approach which allows a broader definition of astrology. This should not however exclude the consideration that astrology often is thought of as a causal system. One consequence of this, which is discussed in the following sub-section, is that the assumption of a causal model can have an impact on the question of whether astrology works.

7.8.2 Experiential Evaluations of Astrology's Utility

Astrologers sometimes acknowledge that specific instances of astrological work are neither useful nor true. For instance Dane Rudhyar wrote: 'Since I started writing on astrology in 1933 (over 1,000 articles and some 25 books ago), I have received many letters from people telling me how fearful or psychologically confused they had become after consulting even a well-known astrologer and being given biased character analyses and/or predictions of illness, catastrophe, or even death.'¹⁷⁸

¹⁷⁶ Cornelius, *Moment of Astrology*, p. 301.

¹⁷⁷ Pingree, *From Astral Omens to Astrology*, pp. 21 – 2.

¹⁷⁸ Rudhyar, 'Review' (of Dean et al's *Recent Advances*), pp. 84 – 5.

The possibility that harm may come from astrology has been recognised for at least two millennia. Thus Cicero, in his discussion of divination – of which he understood judicial astrology to be one form - wrote: ‘I do not even think that the knowledge of futurity would be useful to us. How miserable would have been the life of King Priam if from his youth he could have foreseen the calamities which awaited his old age!’¹⁷⁹ In this case the prediction itself would have been accurate, but its consequences detrimental to the individual. It is also possible to consider that such prophecies may be self-fulfilling. For instance in a letter written to a friend in 1640, Descartes criticised a specific astrological reading for the astronomer Martin Hortensius:

Hortensius was in Italy for several years, got mixed up in having his horoscope done, and said to two young men of that country who were with him, that he would die in the year 1639, and told them they would not live for very long thereafter: now he died that summer, as you know, and those two young men were then in such a state of fear that one of them is already now dead; and the other, who is the son of Heinsius, is languishing and so sad as to make it seem that astrology was not wrong. What a wonderful science, that serves to kill people who perhaps wouldn't have been ill without it!¹⁸⁰

The possibility that astrology could cause harm in such ways can be accommodated in James's philosophy as the creative power of thought being applied in a detrimental way. An excerpt from a contemporary post by ‘BrokenHearted88’ on the forum of an Australian support service for anxiety and depression illustrate the continuing potential for astrology to have a detrimental effect on the life of an individual: ‘I have recently realized that I have developed an addiction to astrology... I use horoscopes, tarot readings, angel card reading & yes/no Q&A apps to decide how I feel, what I should do and what other people must be feeling about me. I am using these in an obsessive way...’.¹⁸¹ The issues described by BrokenHearted88 could be understood, in psychiatric terms, as ‘dependent personality disorder’ – the first two diagnostic criteria

¹⁷⁹ Cicero, Marcus Tullius, *On Divination*, in: Cicero, C.D. Yonge (tr.), *The Nature of the Gods and On Divination* (New York: Prometheus Books, 1997) p.208 (II IX). For Cicero's characterisation of judicial astrology as one form of divination, e.g.: ‘that kind of divination called astrology’ – p. 183 (I XLII).

¹⁸⁰ Translated by the present author, with assistance from Mary Valiakas, from: René Descartes, Victor Cousin (ed.), *Oeuvres de Descartes* (Vol. 8) (Paris: F. G. Levrault, 1824), p.199 – from a letter to his friend R. P. Mersenne, 29th January 1640. Thanks to Mary for her help with the translation. The son of Heinsius recovered – Richard Watson, *Cogito Ergo Sum: The Life of René Descartes* (Jaffrey, New Hampshire: David R. Godine, 2007) p.293.

¹⁸¹ ‘BrokenHearted88’ – public post on <https://www.beyondblue.org.au/get-support/online-forums/anxiety/anxiety-and-my-astrology-addiction> posted 20th March 2017 (accessed 17th December 2018).

for which are that an individual ‘Has difficulty making everyday decisions without an excessive amount of advice and reassurance from others’, and ‘Needs others to assume responsibility for most major areas of his or her life.’¹⁸² Insofar as BrokenHearted88 sought absolution from personal responsibility through astrology, Augustine’s criticism would be relevant:

sweet it is to praise the Lord and say “Have mercy on me; bring healing to a soul that has sinned against you”... This truth is our whole salvation, but the astrologers try to do away with it. They tell us that the cause of sin is determined in the heavens and we cannot escape it, and that this or that is the work of Venus or Saturn or Mars.¹⁸³

Astrologers have long been aware that astrology might harm instead of helping. Thus for example Lilly exhorted astrologers, ‘afflict not the miserable with terror of a harsh judgment; in such cases, let them know their hard fate by degrees; direct them to call on *God* to divert his *judgments* impending over them’¹⁸⁴ The ethical codes of contemporary astrological organisations often urge a similarly sensitive approach upon their members. For instance the National Council for Geocosmic Research (NCGR) states that ‘Astrologers do not make astrological statements, predictions or forecasts in the course of the solicitation of clients or students that are misleading either in their optimism or their negativity, or that are frightening or intimidating.’¹⁸⁵ The International Society for Astrological Research (ISAR) posits ‘the prime directive that supersedes all other ethics: do no harm’, and continues, ‘Never needlessly frighten a client with extreme predictions, nor create false hopes in a client, and always affirm that every astrological configuration can manifest in a variety of ways.’¹⁸⁶

In the previous chapter I elaborated on the conflicting ideas of astrology as either an information retrieval system, or as dialogue with a responsive cosmos. These are

¹⁸² American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders* (5th edn.) (Arlington, VA: American Psychiatric Association, 2013) p. 675. I consulted the psychiatric social worker Kirk Little regarding this diagnosis and thank him for his input.

¹⁸³ St. Augustine, *Confessions*, p.73 (IV 3)

¹⁸⁴ Lilly, *Christian Astrology*, ‘To the Student in Astrology’ (in place of a page number this page has the letter ‘B’. It follows immediately after the ‘Contents’ pages at the front of the text). Spellings have been modernised. Emphases are original.

¹⁸⁵ National Council for Geocosmic Research (NCGR), ‘Our Code of Ethics’ (Adopted 10th October 1998), Section A.2, D.1. <https://geocosmic.org/about-ncgr/code-of-ethics/> (accessed 21st December 2018).

¹⁸⁶ International Society for Astrological Research (ISAR), ‘Ethical Standards and Guidelines (Version 5 Revised December 2007; Original Version Published in 2001’ p. 1 from www.isarastrology.com/code-of-ethics (accessed 21st December 2018).

relevant here, since the picture emerging is that the potential for astrology to cause psychological difficulties may arise upon the view that it delivers objective information. The ‘information retrieval’ view of astrology was epitomised by Dean et al when they postulated ‘a world where astrology works to the extent claimed in astrology books’.¹⁸⁷ As emerges in the following quotation they regarded their postulated world as a *reductio ad absurdum*:

Hunger and hardship have disappeared because economic trends and climate are predictable. Science has disappeared because horary astrology answers any question. So has competitive sport for the same reason. Cars and planes are hazard-free because assembly times conducive to accidents are routinely avoided. Crime, war, illness and divorce are unknown because predictable. Every person is empowered, self-actualised, spiritually enlightened, and knows their individual purpose and direction. Abuse of astrological knowledge is prevented by restricting it to those whose charts reveal due merit. This is astrology world. Now compare astrology world with the actual world. Bearing in mind that astrology has had two thousand years to get it right, can we conclude that it really does deliver? Probably not.¹⁸⁸

Whilst it is valid as a critique of many of the more exuberant claims to be found in astrology books, I suggest that Dean et al’s discussion of ‘astrology world’ can equally function as a critique of the views that are commonly brought to bear by critics of astrology, including themselves. ‘Astrology world’ is the apotheosis of the view of astrology as an information-retrieval system, from which all trace of subjective involvement is absent. Since all things are known in advance, it must be impossible for the individual to participate in and change the world, or even their own life. In light of the experiences from astrological clients reported in this sub-section, it must be open to question whether this would in fact be a world in which astrology worked or was useful in James’s understanding of those terms; it seems as though it might be a dystopia rather than a utopia for at least some of its citizens. I turn now to a Jamesian critique of this state of affairs.

‘Astrology world’ exemplifies James’s description of ‘rationalistic philosophy’ which ‘has always aspired to a rounded-in view of the whole of things, a closed system of kinds, from which the notion of essential novelty being possible is ruled out in

¹⁸⁷ Dean et al in: Phillipson, *Astrology Year Zero*, p. 151.

¹⁸⁸ Dean et al in: Phillipson, *Astrology Year Zero*, p. 151.

advance.’¹⁸⁹ He compared this to empiricism as he understood it, under which ‘reality cannot be thus confined by a conceptual ring-fence. It overflows, exceeds, and alters. It may turn into novelties, and can be known adequately only by following its singularities from moment to moment as experience grows.’¹⁹⁰

In chapter 2 I quoted Curry’s assertion that, in astrology, ‘every prediction is also an intervention’, and his deduction that ‘this truth precludes any fantasies of perfect and complete foreknowledge’.¹⁹¹ This perspective insists on the existence of novelty in human experience. It is therefore in conflict with the assumptions which inform ‘astrology world’, chief amongst them being the implicit assumption of a ‘view from nowhere’ – which, as was seen in chapter 1, is Thomas Nagel’s caricature of the viewpoint needed for entirely objective knowledge. A precursor of the ‘view from nowhere’ can be seen James’s assertion that ‘The truth is too great for any one actual mind, even though that mind be dubbed ‘the Absolute’, to know the whole of it. The facts and worths of life need many cognizers to take them in. There is no point of view absolutely public and universal.’¹⁹²

In the previous chapter of this thesis I discussed James’s insistence that ‘the only God worthy of the name *must* be finite’.¹⁹³ This was another way in which James denied the existence of an ‘Absolute’, however conceived. As Pawelski remarked, for James, ‘God must be small enough to leave us room for meaningful contributions’.¹⁹⁴ Further, ‘Just as the theistic God is too big to allow for the meaning James seeks, he is also too big to satisfy James’s need for intimacy. Because he is independent of us, he cannot be affected by our prayers or moved by our pleas for aid.’¹⁹⁵ The connection I want to make here is that ‘astrology world’ casts astrology in the role of an Absolute, defining life on Earth to the last detail and – therefore – denying the possibility of human beings finding either meaning or intimacy. If astrology is to be compatible with James’s philosophy, it would need to be finite in a similar way to James’s finite God. That is to

¹⁸⁹ James, *Some Problems of Philosophy*, p. 1033

¹⁹⁰ James, *Some Problems of Philosophy*, p. 1033

¹⁹¹ Curry in Willis and Curry, *Astrology Science and Culture*, p.55.

¹⁹² James, ‘Talks to Teachers’, p. 708.

¹⁹³ James, *Pluralistic Universe*, p.687. Original emphasis.

¹⁹⁴ Pawelski, *Dynamic Individualism of William James*, p. 117.

¹⁹⁵ Pawelski, *Dynamic Individualism of William James*, p. 117.

say that it would not be omniscient or omnipotent, and – in consequence – it might not always work.

In my interview with Bernard Eccles I asked him if astrology always worked. He said:

No... There *are* times when it doesn't work. But that doesn't rock my faith in astrology – it's part of the mystery. If it worked all the time, it would be too mechanistic. It would be a reliable technology. And one of the great things about astrology is that it is not a reliable technology... I don't want astrology to be like Meccano, with simple bits bolted together and a structure which is entirely understandable. That's not how it is; there has to be that mystery. And if sometimes things are withheld from you, well, that's the game. But that's the game with any kind of divination, I think. You seek to penetrate this veil of unknowing; and sometimes you reach out into the fog and you get more fog! That's what makes it scary, and that's what makes it – I won't say 'fun', but it makes you realise that you are dealing with something. It's an essential quality in life. If life was entirely predictable and knowable, mechanical in that sense, then I think you'd die of boredom. So for astrology not to work every so often is quite good!¹⁹⁶

Eccles's account characterises the way astrology works as unpredictable, unquantifiable, even idiosyncratic. These qualities are reminiscent of several of the descriptions of divination in the previous chapter of this thesis. The question remaining to be answered in this section is, what – under this account of astrology – would it mean, at a practical level, to say that 'astrology works'?

Rafael Nasser compiled a book entitled *Under One Sky* in which he presented detailed interpretations from twelve astrologers of the horoscope of one lady, to whom he assigned the pseudonym 'Joyce'.¹⁹⁷ I asked him what Joyce had found useful in the readings and he replied: 'She appreciated most the insights that reverberated at a core level and expanded her self understanding. In other words, the interpretations that engendered a sense of meaning had a relatively stronger impact on her.'¹⁹⁸ In similar vein, Rudhyar argued, 'If, after having studied astrology and his exactly calculated birth chart, a person for the first time... is able to feel a direction and purpose inherent in his life as an individual... then astrology is "existentially proven" to be effective in this particular case. It "works" – for him.'¹⁹⁹

¹⁹⁶ Bernard Eccles, interview, 2005.

¹⁹⁷ Rafael Nasser, Rafael, Jodie Forrest (ed.), *Under One Sky* (Chapel Hill, NC: Seven Paws Press, 2004).

¹⁹⁸ Rafael Nasser, email to the author 2nd August 2013, quoted with permission.

¹⁹⁹ Rudhyar, 'How Can Astrology's Claims Be Proven Valid'.

The argument that astrology can furnish a life with meaning was also made by Geoffrey Dean when (as seen above) he argued that astrology ‘provides meaning, it enriches life, it does good’.²⁰⁰ This was made in the context, already discussed, of such qualities being subjective ‘satisfaction’ and not objective ‘accuracy’.²⁰¹ When set in the context of pragmatic truth, however, a sense of meaning in life is not qualified in that way. In addition to the description already given above of James’s understanding of ‘meaning’ as an ability to engage creatively with life, the following quotation can be added which illustrates this aspect of his thought:

If this life be not a real fight, in which something is eternally gained for the universe by success, it is no better than a game of private theatricals from which one may withdraw at will. But it feels like a real fight – as if there were something really wild in the universe which we, with all our idealities and faithfulnesses, are needed to redeem; and first of all to redeem our own hearts from atheisms and fears. For such a half-wild, half-saved universe our nature is adapted.²⁰²

Building on the discussion in this sub-section, it can be postulated that in order for astrology to work in a way that is congenial for human happiness and mental health, it may be necessary for it to be finite – to involve vaguenesses and lacunae which invite the individual’s engagement, rather than leaving them a spectator to their own life.

7.9 Epistemic Pluralism

Epistemic pluralism is opposed to a position that is commonly assumed in epistemology with little or no discussion. Hence Pascal Engel contended that ‘One of the most common assumptions of contemporary epistemology is that... there is but one notion of truth, of justification, of rationality and of evidence.’²⁰³ He suggested the term ‘epistemic monism’ for this approach.²⁰⁴ By contrast, ‘epistemic pluralism’ (also called ‘truth pluralism’) is ‘the view that there are several ways of being true... in particular, different ways of being true apply to different domains of discourse. The way in which

²⁰⁰ Dean, ‘Truth of Astrology Competition’, p.51.

²⁰¹ Dean, ‘Truth of Astrology Competition’, p.51.

²⁰² James, *Will to Believe*, p. 502.

²⁰³ P. Engel, ‘A Plea for Epistemic Monism’ in: Annalisa Coliva and Nikolaj Jang Lee Linding Pedersen (eds.), *Epistemic Pluralism* (Cham, Switzerland: Palgrave MacMillan/Springer, 2017) p. 96.

²⁰⁴ Engel, ‘A Plea for Epistemic Monism’, p. 96.

propositions about physics are true could differ from the way in which the propositions of morality are true.’²⁰⁵

Epistemic pluralism was recently described as ‘an emerging area of research in epistemology with dramatic implications for the discipline.’²⁰⁶ It is, however, substantially present in James’s work – as was noted by José M. Medina when he discussed James’s pluralistic approach in which ‘Different epistemic standpoints engage each other and enter into negotiations.’²⁰⁷ James himself argued that ‘Our account of truth is an account of truths in the plural, of processes of leading, realized in *rebus*, and having only this quality in common, that they *pay*.’²⁰⁸ Perhaps the most obvious example of this pluralism is found in the relationship (or lack thereof) between scientific and religious conceptions of truth which has been discussed throughout this thesis, particularly in chapters 5 and 6. For James,

Science gives to all of us telegraphy, electric lighting, and diagnosis, and succeeds in preventing and curing a certain amount of disease. Religion in the shape of mind-cure gives to some of us serenity, moral poise, and happiness, and prevents certain forms of disease as well as science does, or even better in a certain class of persons. Evidently, then, the science and the religion are both of them genuine keys for unlocking the world’s treasure-house... Just as evidently neither is exhaustive or exclusive of the other’s simultaneous use.²⁰⁹

In describing and elaborating on his position, Seigfried noted that for James:

Correct interpretation requires a recognition of context, which includes the occasion for the discourse, the time and place as well as the audience addressed, and the universe of discourse, for example, sub-atomic particles as the ultimate data in the realm of physics and phonemes as the assumed basis for language development in linguistics.²¹⁰

A consequence of the difference in humanity’s potential range of experiences is that different theories of truth may apply with different levels of relevance in different situations. Hence Lynch’s assertion that ‘Pluralist theories of truth have significant

²⁰⁵ Nikolaj J. L. L. Pedersen and Michael P. Lynch, ‘Truth Pluralism’ in Michael Glanzberg (ed.), *The Oxford Handbook of Truth* (Oxford University Press, 2018) p. 543

²⁰⁶ Annalisa Coliva and Nikolaj Jang Lee Linding Pedersen, ‘Introduction’ in Annalisa Coliva and Nikolaj Jang Lee Linding Pedersen (eds.), *Epistemic Pluralism* (Cham, Switzerland: Palgrave MacMillan/Springer, 2017) p. 1.

²⁰⁷ Medina, ‘James on Truth and Solidarity’, p. 131.

²⁰⁸ James, *Pragmatism*, p. 581.

²⁰⁹ James, *Varieties of Religious Experience*, p.122.

²¹⁰ Seigfried, *William James’s Radical Reconstruction of Philosophy*, p.179.

advantages. Most important, they account for the fact that every traditional theory of truth seems plausible in some domains but not in others.’²¹¹ A significant facet of James’s pragmatic theory of truth is that it can subsume, rather than replacing, other theories of truth. This may be seen in regard to the correspondence theory of truth. James remarked that ‘every living man would instantly define right thinking as thinking in correspondence with reality.’²¹² He further argued, however, that the correspondence theory of truth needed to be fleshed out by pragmatic considerations:

The pragmatizing epistemologist posits... a reality and a mind with ideas. What, now, he asks, can make those ideas true of that reality? Ordinary epistemology contents itself with the vague statement that the ideas must ‘correspond’ or ‘agree’; the pragmatist insists on being more concrete, and asks what such ‘agreement’ may mean in detail. He finds first that the ideas must point to or lead towards that reality and no other, and then that the pointings and leadings must yield satisfaction as their result.²¹³

Although, as discussed in chapter 3 of this thesis, the coherence theory had not emerged as a distinct theory of truth under that name during James’s lifetime, a case can be made for considering that his pragmatic approach could also have subsumed the coherence theory. Continuing on from his discussion of the correspondence theory, James argued:

As we humans are constituted in point of fact, we find that to believe in other men’s minds, in independent physical realities, in past events, in eternal logical relations, is satisfactory. We find hope satisfactory. We often find it satisfactory to cease to doubt. Above all we find *consistency* satisfactory, consistency between the present idea and the entire rest of our mental equipment, including the whole order of our sensations, and... our whole stock of previously acquired truths.²¹⁴

Given the propensity to find satisfaction in consistency; and given the pragmatic equation of satisfaction (in the long run) with truth, it would follow that the consistency of a proposition with a broader explanatory scheme would support the truth of the proposition. I suggest that this shows the potential for a pragmatic theory of truth to include the principle of coherence.

²¹¹ Lynch, ‘Primitivism, Identity Theory, and Alethic Pluralism’, p. 620.

²¹² William James, ‘Remarks on Spencer’s Definition of Mind as Correspondence’ in: William James; Frederick H. Burkhardt, Fredson Bowers, Ignas K. Skrupskelis (eds.), *Essays in Philosophy (The Works of William James)* (Cambridge, Mass: 1978 [1878]), p. 16.

²¹³ James, *The Meaning of Truth*, p. 923.

²¹⁴ James, *The Meaning of Truth*, p. 923. Original emphasis.

Unless one wished to argue that the pragmatic theory of truth should be exempt from its own strictures – and I have not encountered such an argument in my research – it would follow that it should operate reflexively. This is to say that in some situations – such as scientific tests – it would be more useful to characterise truth in terms of correspondence between a theory and data, than by expedience. To do so would be expedient in that situation, and hence the pragmatic theory of truth would be present as an underlying principle, but would efface itself if and when correspondence was the most *useful* measure of truth.

When James qualified the scope of ‘the expedient’, he also stated that he meant ‘Expedient in almost any fashion’ and – as Johnson notes – this means that for James, ‘the expedient’ ‘may perhaps be only the psychologically expedient’.²¹⁵ This brings us back to the question, whether James’s entire conception of truth leads, despite his best intentions, to relativism.

7.10 Relativism – an Evaluation

As discussed in section 7.4, James’s account of pragmatic truth has been widely criticised as inherently relativistic. Having surveyed the way in which pragmatism fits into James’s broader philosophy, I will now revisit that criticism. In particular I will focus on the question of whether astrology, which has also been accused of fostering relativism, can be substantiated by a pragmatic theory of truth when they (allegedly) share this weakness.

In chapter 3 I cited Kirkham’s definition of relativism: ‘The truth value of propositions varies from person to person.’²¹⁶ Janet Radcliffe Richards’s discussion of astrology and relativism shows the type of challenge this can pose. Assuming the position of devil’s advocate she put forward the argument that ‘Astrology should be taught in schools... Astrologers have as much right to be heard as anyone else.’²¹⁷ In dismissing that position, she then wrote of ‘part-time relativists who want trained surgeons rather than

²¹⁵ James, *Pragmatism*, p.583; Johnson, *Focusing on Truth*, p.68.

²¹⁶ Kirkham, *Theories of Truth*, p. 98.

²¹⁷ Janet Radcliffe Richards, *Human Nature after Darwin: A philosophical introduction* (London: Routledge, 2000) p.49.

witch-doctors to operate on them’ and asserted that ‘relativism... cannot be used selectively, to discredit *particular* scientific claims.’²¹⁸ In her view, astrologers invoke relativism to dismiss the scientific perspective on, and research into, astrology; and this is untenable because to dismiss science as the basis for truth in any area would be to dismiss *all* the benefits of science, such as modern surgery. A similar argument, quoted by Radcliffe Richards, came from Richard Dawkins: ‘show me a cultural relativist at 30,000 feet and I’ll show you a hypocrite’.²¹⁹

The basic trope of such arguments is an extrapolation from relativism to undesirable consequences, ranging from hypocrisy to avoidable pain or death. It is predicated on the idea that relativism is innately indiscriminate, so that it would sweep away all the gains of modern science. This characterisation can be challenged. Because the perceived problem of relativism is tied in with the epistemological status of pragmatism and of astrology, I will devote some analysis to its status in the context of the three theories of truth, before proceeding to the question of how the term ‘relativism’ can be understood.

The emphasis given by Radcliffe Richards and Dawkins to the importance of practical consequences may make it seem as if they would give primacy to the pragmatic theory of truth. When examined, however, the position is not so straightforward. This can be seen when, elaborating on his statement above, Dawkins added, ‘Airplanes built according to scientific principles work... Airplanes built to tribal or mythological specifications... don’t.’²²⁰ With this statement he conflated the pragmatic and coherence theories, assuming complete equivalence between coherence with scientific principles on one hand, and pragmatic functionality on the other, thereby omitting human involvement in the evolution and application of scientific theories. Dawkins thus exemplified the approach criticised by Feyerabend: ‘The idea of a method that contains firm, unchanging, and absolutely binding principles for conducting the

²¹⁸ Richards, *Human Nature after Darwin*, p.49. Original emphasis.

²¹⁹ Richard Dawkins, *River Out of Eden: A Darwinian View of Life* (New York, NY: Basic Book, 1995) pp. 31-32. Quoted by Richards, *Human Nature after Darwin*, p. 49. Further examples of such arguments are: I. C. Jarvie, ‘The Justificationist Roots of Relativism’ in Charles M. Lewis (ed.), *Relativism and Religion* (New York, NY: Palgrave MacMillan, 1995) p. 61 and Anthony Grafton, *Cardano’s Cosmos: The Worlds and Works of a Renaissance Astrologer* (Cambridge, Mass: Harvard University Press, 1999) p. 176. Both used the example of passenger flight, Grafton also mentioned computers and fax machines.

²²⁰ Dawkins, *River Out of Eden*, p. 32.

business of science meets considerable difficulty when confronted with the results of historical research.’²²¹

Feyerabend’s point can be illustrated, using Dawkins’s example of aircraft design, with the example of the wing design of the Consolidated B-24 (‘Liberator’) bomber used extensively by the Allies during World War 2. Regarding this wing, David Bloor observed: ‘When... the secret of its design was revealed, it turned out to have no intelligible relation to the laws of fluid dynamics. The procedure was pseudoscientific hocus-pocus.’²²² By contrast, a wing designed by Albert Einstein in conformity with the laws of fluid dynamics proved to be unusable in practice.²²³ In the first case, what worked did not cohere with science; in the second, what cohered with science did not work. It could be objected that such instances are mere missteps in the forward march of a science that moves inexorably closer to a complete account of reality; this interpretation would (as seen in section 7.2 above) fit with Peirce’s conception of science’s role in human knowledge. For James, on the other hand, science was finite in scope and its theories would always require interpretation and judicious application: ‘no hypothesis is truer than any other in the sense of being a more literal copy of reality. They are all but ways of talking on our part, to be compared solely from the point of view of their *use*.’²²⁴ At the conclusion of his investigation of the history of aerodynamics, Bloor arrived at a conclusion consistent with James’s: ‘we should not allow ourselves to think that, as these historical relativities are exposed, knowledge progressively sheds its relative character and moves closer to something absolute. To cherish such a picture is to indulge in metaphysics.’²²⁵

As discussed in section 7.8.2 above, a significant part of James’s philosophy consisted in a refutation of ‘rationalistic philosophy’ which offered ‘a rounded-in view of the whole of things, a closed system of kinds, from which the notion of essential novelty being possible is ruled out in advance.’²²⁶ Even if one believes, contra James, in the possibility of a perfected and comprehensive scientific account of reality, this is a *belief*

²²¹ Feyerabend, *Against Method*, p. 14.

²²² David Bloor, *The Enigma of the Aerofoil: Rival Theories in Aerodynamics, 1909 – 1930* (Chicago: University of Chicago Press, 2011) p. 441

²²³ Bloor, *The Enigma of the Aerofoil*, pp. 299 – 300.

²²⁴ James, *Pragmatism*, pp. 569-70. Original emphasis.

²²⁵ Bloor, *The Enigma of the Aerofoil*, p. 434

²²⁶ James, *Some Problems of Philosophy*, p. 1033. Previously cited in section 7.8.2 above.

regarding a possible future, so that it cannot be acceptable to assume, as does Dawkins, that it is already the case. As Feyerabend put it:

we may one day find a theory that can explain everything in our world. Such a development is not likely, one might almost be inclined to say that it is logically impossible, but I would still not want to exclude it. The point is that the development has not yet started: today we have to do science without being able to rely on any well defined and stable 'scientific method'.²²⁷

With this context, I turn to the characterisation of relativism used by Radcliffe Richards and Dawkins. It has the curious quality of being simultaneously absolutist as well as relativist, in the sense that it is invested with the quality of sweeping away absolutely *all* criteria and standards for truth. This exemplifies what Barbara Herrnstein Smith has called 'the Egalitarian Fallacy', which she defined as 'the idea that a denial of objective value commits one to the view that all judgements are "equal", "equally good", or "equally valid"'.²²⁸ The 'Egalitarian Fallacy' portrays relativism as making the claim (which, as seen above, is sometimes made on behalf of science) to provide an absolutist definition of truth. Smith remarked that the 'Egalitarian Fallacy' qualifies as fallacious because, 'if someone rejects the notion of validity in the classic (objectivist) sense, what follows is not that she thinks *all* theories (and so on) are *equally* valid but that she thinks *no* theory (and so on) is valid *in the classic sense*.'²²⁹ She had previously defined 'the classic sense' of judgement as meaning 'justifiable on totally context-transcendent and subject-independent grounds'.²³⁰

The term 'relativism', as defined through its use by Radcliffe Richards and Dawkins, would negate advances in scientific understanding in fields such as surgery and aerodynamics. The relativism that is entailed by James's pragmatism follows from giving primacy to pragmatic considerations, so that scientific theories can be used insofar as it is useful to do so, without thereby overruling the need for human involvement in assessing the efficacy of the theory when it is applied.

²²⁷ Feyerabend, *Science in a Free Society*, p. 99.

²²⁸ Barbara Herrnstein Smith, *Contingencies of Value: Alternative Perspectives for Critical Theory* (Cambridge, Mass.: Harvard University Press, 1988) p. 101.

²²⁹ Barbara Herrnstein Smith, *Belief and Resistance: Dynamics of Contemporary Intellectual Controversy* (Cambridge, Mass.: Harvard University Press, 1997), p. 77. Original emphases.

²³⁰ Smith, *Belief and Resistance*, p. 6.

Neither pragmatism nor astrology, under this view, entail the thorough-going epistemological relativism which would reduce knowledge in all fields to a matter of idiosyncratic individual preference. There is however a sense in which – under the account of divinatory astrology discussed in this chapter and the previous one – the truth value of the proposition ‘astrology works’ will vary from person to person and therefore be to that extent relativistic.²³¹ It has been seen that, in the context of radical empiricism – specifically the non-separability of perceiving mind and perceived events – expectation and belief play a role in determining what is experienced. If this is so then it might be expected that both the belief that astrology is not true, and the belief that it is true, would tend to evoke events from the responsive universe conducive to the perpetuation of those beliefs.

The truth of astrology-as-divination, under a pragmatic conception, can therefore be described as relativistic to a limited extent. O’Grady’s description of ‘moderate epistemological relativism’ is relevant here.²³² He defined this position as one where ‘reasons are offered as to why one alternative is appropriate in a particular scenario and not in another. Thus there is an underlying conception of a means of judging appropriateness or viability.’²³³ This describes astrology-as-divination seen in the context of Jamesian pragmatism. Astrology, seen this way, retains a way of judging its viability – albeit, that way is necessarily the subjective one of whether a particular individual finds the practice useful. And there is an explanation for why astrology would not be evaluated on the same basis as surgery, so that the case put forward by Radcliffe Richards does not obtain – to consider astrology true in this way does not commit one to a preference for treatment by witch doctor over surgery.

In the pragmatic context discussed in this chapter, the individual can evaluate the proposition ‘astrology works’ on the basis of experience. In light of the distinction made in chapter 6 between astrology as an information retrieval service, and astrology as dialogue, it follows that in the latter case – which I have taken as the model for astrology-as-divination – the evaluation would depend upon intimacy, in James’s sense.

²³¹ This is an application of Kirkham’s definition, cited at the beginning of this section (Kirkham, *Theories of Truth*, p. 98).

²³² Paul O’Grady, *Relativism* (Chesham: Acumen, 2002) p. 91.

²³³ O’Grady, *Relativism*, pp. 90 – 91.

So that if an individual felt that their engagement with astrology revealed a responsive, providential engagement of the more-than-human in the details of their lives, then they would have reason to conclude that astrology works and is therefore true. In section 7.8.2 above I cited Eccles's conclusion that 'There *are* times when [astrology] doesn't work'.²³⁴ If this is the case, it would be necessary for anyone involved with astrology to remain on the *qui vive* in their dealings with it – to take, therefore, the approach advocated by Herrnstein Smith when – in denying the validity of epistemic monism – she stressed the need, in the face of 'different ideas, theories or beliefs' to 'assess them continuously, *in* and *as* the very process of playing and living them out in the relative domains of our lives'.²³⁵ Under the account of astrology-as-divination, the universe is responsive, but may not always respond in the way expected, or at all. The onus therefore – on this view – would be on astrologers and their clients to always question if, and how, an astrology reading connected to their lives.

In this chapter an account has emerged whereby – under the pragmatic theory of truth – astrology-as-divination could be judged to work, and therefore to be true, without this opening the gates to relativism. Its starting point is the experience that astrology works – discussed above, particularly in sections 7.1 and 7.8. This can also be explained – as seen in section 7.2 and subsequently – by invoking 'reasoning errors' to explain the fact of astrology *seeming* to work. Both of these positions regarding astrology's truth-status depend on a set of beliefs about the nature of the world and the place of human beings within it. I turn now to James's discussion of such beliefs.

7.11 The Right to Believe

James's major work on the role and power of belief is *The Will to Believe*; he subsequently regretted his choice of title, suggesting that 'the right to believe' conveyed his intention more accurately.²³⁶ The significance of the 'right to believe', and its relevance to astrology, can be framed by first considering the view to which it is opposed. James presented *The Will to Believe* as a counterargument against the positivist position propounded by the philosopher, mathematician and admirer of Peirce

²³⁴ Bernard Eccles, interview, 2005.

²³⁵ Smith, *Belief and Resistance*, p. 149. Original emphases.

²³⁶ At e.g. James, *Pragmatism*, p.600.

W.K. Clifford (1845 – 79) that ‘It is wrong always, everywhere, and for anyone, to believe anything upon insufficient evidence.’²³⁷ In Clifford’s view, evidence of the kind found in physics is the exemplar of what evidence should be – historical evidence, for example, is ‘more precarious and less exact’ in comparison.²³⁸

In its emphasis on the danger of individual errors of judgement, Clifford’s position anticipates that taken by some contemporary critics of astrology. It recalls the insistence of Dean et al. on avoiding reasoning errors – seen for instance in their statements that, compared to astrologers, ‘we are more careful. In fact hugely more careful’, and that ‘We want to avoid being misled, and avoiding being misled is part of what being scientific is about’.²³⁹ Another example of such an attitude can be found when Richard Dawkins wrote that belief in ‘astrology, paranormalism and alien visitations’ stems from ‘a normal and, from many points of view, desirable credulity in children which, unless we are careful, can spill over into adulthood, with unfortunate results.’²⁴⁰

The common theme in these quotations can be elucidated with Clifford’s example of a ship owner who trusts to ‘Providence’ rather than undertaking a thorough overhaul and refit of an aged ship which subsequently sinks, resulting in the death of all its passengers.²⁴¹ His conclusion: ‘It is admitted that he did sincerely believe in the soundness of his ship; but the sincerity of his conviction can in no wise help him, because *he had no right to believe on such evidence as was before him.*’²⁴² The model of how evaluation *should* proceed is that of an observer, standing back from the thing observed, and reaching a rational evaluation, consonant with the evidence. And by ‘evidence’ is meant objectively-verifiable data.

James’s ‘right to believe’ is an argument against Clifford’s position. In discussing it, James also used a nautical metaphor: ‘If I refuse to bale out a boat because I am in

²³⁷ Cited by James in *The Will to Believe*, p.462. Original at: Clifford, ‘The Ethics of Belief’, p.186. Clifford’s admiration of Peirce – specifically as a logician – is recorded in a letter by Edward L. Youmans in: John Fisk, *Edward Livingston Youmans* (New York: Appleton, 1894), p.340.

²³⁸ Clifford, ‘The Ethics of Belief’, p.209.

²³⁹ Dean et al in Phillipson, *Astrology Year Zero*, p.131, p. 132.

²⁴⁰ Dawkins, *Unweaving the Rainbow*, p. 138.

²⁴¹ Clifford, ‘The Ethics of Belief’, p.177.

²⁴² Clifford, ‘The Ethics of Belief’, p.178. Original emphasis.

doubt whether my efforts will keep her afloat, I am really helping to sink her.’²⁴³ Although he would not deny that Clifford’s evaluation of the ship-owner was fair and true, James denied the universal validity of the model. For James, two distinct philosophies are in play here – the ‘spiritualistic’ and the ‘materialistic’, which were discussed in the previous chapter.²⁴⁴ He regarded these as expressions of individual temperament – ‘the sympathetic and the cynical temper’ respectively.²⁴⁵ James denied the possibility that an individual could stand altogether outside the preferences and biases inherent in their psychological make-up: ‘the agnostic “thou shalt not believe without coercive sensible evidence” is simply an expression (free to anyone to make) of private personal appetite for evidence of a certain peculiar kind.’²⁴⁶ Under this account, the requirement that subjective factors should be excluded from the evaluation of astrology would, itself, be an expression of a subjective propensity.

James also argued against the competence of materialistic science to evaluate religious experience:

There are... cases where a fact cannot come at all unless a preliminary faith exists in its coming. *And where faith in a fact can help create that fact*, that would be an insane logic which would say that faith running ahead of scientific evidence is the “lowest kind of immorality” into which a thinking being can fall. Yet such is the logic by which our scientific absolutists pretend to regulate our lives!²⁴⁷

James had earlier identified the source of the passage he cited – not quite verbatim – here as the argument of the biologist Thomas Henry Huxley (1825 – 95) that faith in a religious dogma in the absence of proof constitutes ‘the lowest depths of immorality’.²⁴⁸ The possibility that many westerners feel similar censure to attend belief in astrology was raised by Campion, in a discussion of studies which showed that 70 per cent of people in the UK and USA read horoscopes but only 20 per cent admitted to belief in

²⁴³ James, *The Will to Believe*, p. 538.

²⁴⁴ James, *A Pluralistic Universe*, p.640.

²⁴⁵ James, *A Pluralistic Universe*, p. 640.

²⁴⁶ James, *The Will to Believe*, p. 498

²⁴⁷ James, *The Will to Believe*, p.474. (Original emphasis) James’s discussion continues to p. 477.

²⁴⁸ James, *The Will to Believe*, p.461. The original source is T. H. Huxley’s contribution to ‘A Modern “Symposium”’ on ‘The Influence upon Morality of a Decline in Religious Belief’ in the journal *Nineteenth Century* 1 (May 1877), which he concluded by suggesting that ‘so long as [people] hold by the plain rule of not pretending to believe what they have no reason to believe because it may be to their advantage so to pretend, they will not have reached the lowest depths of immorality.’ p. 539.

astrology.²⁴⁹ He suggested that Jahoda's observation may apply to astrology – that people are 'apt to be somewhat shamefaced about superstition and liable to deny holding any such beliefs when faced with a strange interviewer'.²⁵⁰

This may be elucidated through Herrnstein Smith's observation that a manifestation of 'epistemic authority' is a tendency for those who subscribe to beliefs outside the consensus to be judged 'ignorant, silly, outlandish, wildly radical, or fraudulent.'²⁵¹ It seems at least plausible that many people tend not to publically admit to belief in astrology because they do not wish to be classified as gullible; they do not allow themselves the 'right to believe' in this sense.

Bernard Eccles, in my interview with him, put forward an argument that is relevant here. He suggested that doubt in astrology tends to arise upon the basis of a mechanistic, scientific world-view, typically acquired at school. Seeing this as being a particular problem for males, he suggested that 'boys are very bothered about *losing control* and not being able to control their environment and themselves'; that therefore they like to 'feel that the world is understandable, and that if they knew enough science they could master it – and then, *nothing would catch them by surprise*.'²⁵²

In section 7.2 above I cited Champion's question regarding the use of reasoning errors as a way to explain instances of astrology apparently working, and his question, 'why such arguments should apply particularly to astrology'.²⁵³ Eccles's comments, coupled with James's discussion of the 'right to believe', raises the possibility that the insistence of many critics on evaluating astrology exclusively by intersubjective evidence may itself be a reasoning error.

7.12 Conclusion

James stated: 'On pragmatistic principles, if the hypothesis of God works satisfactorily in the widest sense of the word, it is true. Now whatever its residual difficulties may be,

²⁴⁹ Champion, *Astrology and Popular Religion*, p.133. The source of this data is: Dean et al, *Recent Advances* p.79, p. 83; Champion also discusses similar data at p. 133 of his text.

²⁵⁰ Gustav Jahoda, *The Psychology of Superstition* (London: Allen Lane/Penguin, 1969) p.26, cited at Champion, *Astrology and Popular Religion*, p.133.

²⁵¹ Smith, *Belief and Resistance*, p. 148.

²⁵² Bernard Eccles, interview, 2005. Original emphasis.

²⁵³ Champion, *Astrology and Popular Religion*, p. 98.

experience shows that it certainly does work...'²⁵⁴ Similarly, if the hypothesis of astrology worked satisfactorily in the widest sense of the word, under James's form of pragmatism, astrology would by that token be true. If something works – and providing it works in line with James's stipulation of being 'expedient in the long run and on the whole' – then, for James, that is an entirely sufficient basis upon which to call it true.²⁵⁵

This point can be underscored by reference to an exchange between James and Walter B. Pitkin. James asserted, 'I am perfectly willing to admit any number of noumenal beings or events into philosophy if only their pragmatic value can be shown.'²⁵⁶ When James used the term 'noumena', he did so in Kant's sense of 'intelligible entities' – that is, entities accessible only through the mind – as opposed to phenomena, 'sensible entities' which are experienced through the physical senses.²⁵⁷ Barnard remarked, apropos of this exchange, that for James, 'metaphysical speculations are... acceptable as long as the spiritual realities they postulate have, in some way or another, observable effects within our experience.'²⁵⁸ For James the hypothesis of God is such a postulate. The argument developed in this chapter is that astrology – specifically, astrology-as-divination – can also be taken as such a postulate.

It was not James's intention to argue that religious belief was incumbent upon any right-thinking person. His intention, rather, was to oppose the view represented in his day by figures such as Clifford and Huxley that there is a moral imperative *not* to believe anything that has not been proven by science. This being the case, it is naturally also the case that the foregoing analysis of astrology's truth-claims under Jamesian pragmatism does not prove the statement 'astrology is true'. It does, however, offer an account – grounded in a philosophical school of thought which is still current – whereby an astrology that did not yield substantial proof in scientific terms, could still be a

²⁵⁴ James, *Pragmatism*, p.618.

²⁵⁵ James, *Pragmatism*, p.583. Original emphases.

²⁵⁶ William James, 'Mr Pitkin's Refutation of "Radical Empiricism"' in: *William James, Essays in Radical Empiricism* (Mineola, NY: Dover, 2003 [1912]) pp. 127 – 8. Originally in: *Journal of Philosophy, Psychology and Scientific Methods*, Vol. 3 No. 26 (20th December 1906), p.712.

Subsequently included as chapter 10 of the posthumous collection *Essays in Radical Empiricism*, p.242.

²⁵⁷ Kant, *Critique of Pure Reason*, p.266, p.267; A249, B306. For James's discussion of the noumena/phenomena distinction with reference to Kant see e.g.: James, *Principles of Psychology* Vol. I, p.363; William James, 'Phenomenalism' (1879 – 80), in: William James; Frederick H. Burkhardt, Fredson Bowers, Ignas K. Skrupskelis (eds.) *Manuscript Essays and Notes* (The Works of William James) (Cambridge, Mass.: Harvard University Press), p.173.

²⁵⁸ Barnard, *Exploring Unseen Worlds*, p.140.

practice susceptible of being evaluated by individuals in their own experience and –
potentially – judged to work, to be useful, and therefore to be true.

Chapter 8: Conclusion

8.1 Key Terms

In chapter 1 I described this thesis as ‘an investigation of claims regarding the truth-status of astrology’. In order to pursue this aim it has been necessary to elucidate, and evaluate the consequences of, different ways of characterising the terms ‘astrology’ and ‘truth’. Both terms are understood and defined in a variety of ways by different commentators, and a challenge I faced in formulating and testing my approach was to find characterisations of each that would be broad enough to comprehend disparate understandings and definitions, yet also precise enough to facilitate discussion in the thesis, and – I hope – promote discussion subsequent to the thesis. The characterisations I have used were introduced in chapter 1 and have been referred to continually through this thesis. The term ‘astrology’ has largely been characterised through a bipartite division into astrology-as-science and astrology-as-divination. The term ‘truth’ has been characterised through the tripartite division formed by the three major theories of truth. (The three – the correspondence, coherence and pragmatic theories – were introduced, and their characterisation as ‘major theories’ discussed, in chapter 1.)

The pursuit of this thesis’s central aim has involved continually evaluating these two sets of terms one against the other. This has been in order to see whether the characterisation of astrology as either science or divination is both necessary and sufficient for the purpose of evaluating astrology’s truth-status; and, whether the three theories of truth suffice for the purpose of drawing out and examining the truth of astrology. This means that whilst the relationship between astrology and truth is the focus of this thesis, the enquiry necessarily also has tested and evaluated the meaning of the terms ‘astrology’ and ‘truth’, so that a significant part of the conclusions have to do with the characterisation of each term.

In sections 8.2 and 8.3 below I will present the conclusions arising for the characterisation of the terms ‘astrology’ and ‘truth’ respectively. I will then consider the particular relevance of William James’s thought in 8.4. A consideration of

conclusions arising for the question ‘is astrology true’ will follow in 8.5, concluding with a discussion of James’s ‘right to believe’ in 8.6.

8.2 The Characterisation of Astrology

In chapter 1 I cited a definition of astrology from Curry: ‘the practice of relating the heavenly bodies to lives and events on earth, and the tradition that has thus been generated’.¹ This is a suitable introductory definition for this thesis, because it does not prejudge how the truth-status of astrology would be evaluated. It differs in this from definitions which impute a specific type of mechanism to astrology, an example of which is the causal definition from Pingree whereby ‘the planets, in their eternal rotations about the earth, transmit motion (change) to the four elements and to the assemblages of elements, animate and inanimate, in the sublunar world.’² It is necessary, for the purposes of this thesis, to define astrology in a way that does not prejudge what manner of phenomenon it is, otherwise this enquiry would be incomplete.

In chapters 5 and 6 respectively I discussed the complications around definitions of the terms ‘science’ and ‘divination’. In chapters 1 and 5 I cited Popper’s discussion of ‘scientific objectivity’, wherein through ‘repeatable experiments... we convince ourselves that we are not dealing with mere isolated “coincidence”, but with events which, on account of their regularity and reproducibility, are in principle intersubjectively testable.’³ I have taken the factor of intersubjective testability in repeatable experiments as the primary defining quality of science as the term is used in this thesis, both in its own right and in the compound ‘astrology-as-science’.

For the term ‘divination’ I drew my central definition (cited in chapters 1 and 6) from Curry’s definition (cited in chapters 1 and 6) of ‘an ongoing dialogue with more-than-human agents.’⁴ In chapter 6 I drew out the contrast between the dialogical relationship to which Curry refers, and what I dubbed the ‘information-retrieval’ model. The latter model, I showed, is typically presupposed to be the mode in which astrology-as-science

¹ Patrick Curry, ‘Astrology’ in *Encyclopaedia of Historians*, p.55.

² Pingree, *From Astral Omens to Astrology*, previously cited in chapters 1 and 7.

³ Popper, *The Logic of Scientific Discovery*, p.23.

⁴ Curry, ‘Embodiment, Alterity and Agency’, pp.114-5. Cited more fully in chapter 1.

would – if true – function. It is also sometimes taken as the paradigm for divination – by Radin for instance.⁵ The term ‘divination’ as used in this thesis, however, refers to a phenomenon that cannot be adequately defined as viewing and retrieving pre-existing information. Without wishing to dismiss the possible reality of such phenomena, I reserve the term ‘divination’ in this discussion for instances of a dialogical relationship between human and more-than-human. In doing so I follow a number of recent precedents including Cornelius, Bird, Brockbank and Radermacher.⁶

Whether the two terms, science and divination, constitute a *sufficient* taxonomy to use in this thesis is a question that needs to be addressed. In the text just cited, for instance, Campion put forward nine different possible characterisations of astrology, including ‘a psychological tool’ and ‘a religion’.⁷ As was seen in chapter 3, Liz Greene argued that astrology can be conceived of in different ways, including ‘as science, art, philosophy, psychology and poetic metaphor’, and that therefore ‘it is irrelevant to attempt to define astrology as “science” or “divination”’.⁸ This notwithstanding, there is a case for characterising astrology as either science or as divination for the purpose of this thesis. In order to illustrate this point I will begin, in the following paragraph, by considering what is implied by evaluating astrology’s truth-status in the first place; upon that basis, the distinction between science and divination will then be explored.

To say, as Curry does in his definition, that astrology is a ‘practice’ and a ‘tradition’ does not provide a basis for the evaluation of its truth-status. For instance quiltmaking is a practice and a tradition, and it is by no means clear how or why one would ascribe a truth-status to quiltmaking.⁹ Similarly, to the extent that it is a practice and a tradition, astrology can be studied from the perspectives of (for instance) history, cosmology, anthropology, history of philosophy and phenomenology (in the sense of the perceptions and experiences of astrologers and their clients). The crucial element, epistemologically speaking, is found in the part of Curry’s definition which asserts that

⁵ Radin, *Real Magic*, pp. 86 – 7, previously cited in chapter 6.

⁶ Cornelius, *Moment of Astrology*, p.45; Bird, *Astrology in Education*, p. 85; Brockbank, *Responsive Cosmos*, p.19; Radermacher, *The Role of Dialogue in Astrological Divination*, p. i.

⁷ Campion, *Astrology and Popular Religion*, p. 178

⁸ Greene, ‘Is Astrology a Divinatory System?’, p. 28. Previously cited in chapter 3.

⁹ Quiltmaking is referred to as a practice and a tradition at e.g.: John Forrest and Deborah Blincoe, *The Natural History of the Traditional Quilt* (Austin, TX: University of Texas Press, 1995) p. 320.

astrology relates the heavenly bodies ‘to lives and events on earth’.¹⁰ Because of this, the practice of astrology involves or eventuates in propositions such as ‘Mars in the First House indicates aggressive, outgoing people who have abundant energy’ and ‘[the lost envelope will be found] close to the east wall of the house, at mantelpiece level, near heat.’¹¹ It is these propositions that are true or false; they are true or false individually, and (in ways which are a matter for philosophical characterisation) the propensity to truth or falsehood in aggregations of such cases can be taken to determine the truth of astrology per se.

It is possible to question the *provenance* and *mode* of such astrological propositions. As regards ‘provenance’, this means asking whether they are a result of natural physical forces existing independently of human interpretation, or whether they arise in the human mind in a way which cannot be adequately captured by science. By ‘mode’ I refer to the distinction (mentioned above, and introduced in chapter 6) whereby astrology-as-science presupposes a mode I described as ‘information retrieval’, whilst astrology-as-divination involves a responsive, dialogical relationship with the more-than-human.

I have taken as a convenient way of characterising the split between the two versions of astrology (as science and as divination) the statement from Dean et al, quoted in chapter 2, that ‘to adequately test astrology the participation of the astrologer must be eliminated.’¹² An astrology whose truth-status could be assessed without the involvement of astrologers would therefore be astrology-as-science. On the other hand, an astrology in which the astrologer is necessarily involved in the interpretation of horoscopic factors – because such interpretation requires the existence of a responsive, dialogical relationship to the more-than-human – would be astrology-as-divination.

My contention is that for so long as the truth-status of astrology is under discussion, its characterisation as either science or divination is both necessary and sufficient. For any other characterisation – psychological astrology, for instance – it would be possible to question whether or not it was supposed to function independently of the astrologer’s

¹⁰ Curry, ‘Astrology’ in *Encyclopaedia of Historians*, p.55.

¹¹ Respectively: Sakoian and Acker, *Astrologer’s Handbook*, p. 154; Derek Appleby, *Horary Astrology: The Art of Astrological Divination* (Bel Air, MD: Astrology Classics/The Astrology Center of America, 2005 [1985]) p. 166.

¹² Dean et al, *Recent Advances*, p.554.

participation, thereby deciding whether – for an epistemological evaluation – it was astrology-as-science or astrology-as-divination.

I thus refer to this pair of terms as *characterisations*, rather than *definitions*, of astrology. This is because they are not intended to be exhaustive or definitive of the subject in the round, but only when it is viewed in an epistemological context. The plurality of possible definitions of astrology dependent on context may be illustrated through William James’s observation that ‘A Beethoven string-quartet is truly... a scraping of horses’ tails on cats’ bowels, and may be exhaustively described in such terms; but the application of this description in no way precludes the simultaneous applicability of an entirely different description.’¹³ On this basis he asked, ‘Why may there not be different points of view for viewing [the world], within each of which all data harmonize, and which the observer may therefore either choose between, or simply cumulate one upon another?’¹⁴

The term ‘astrology-as-divination’ is potentially ambiguous and needs to be closely framed. As discussed in chapter 2, ‘hermeneutic astrology’ could be preferable, were it not that the former term is now established in academic discourse. A source of potential misunderstanding emerged in chapter 6 in the distinction found in William James’s religious philosophy between ‘theism’ and ‘pantheism’. If astrology were a manifestation of a theistic cosmos (in James’s sense of the term), it would follow reliable laws and would therefore function through the application of fixed rules. Such an astrology would therefore differ little from astrology-as-science in terms of practice; dialogue between astrologer and more-than-human agents could not be relevant. In chapter 6 I argued that such dialogue is integral to divination in many accounts (including Curry’s definition and Radermacher’s discussion) and concluded that ‘divination’ as it would operate in a theistic cosmos would not fulfil the definition of divination in the sense generally intended when astrology-as-divination is discussed. Given this, it is integral to the idea of astrology-as-divination that it exists within a universe that is pantheistic rather than theistic (as James uses these terms). This position is discussed at length, and given context in William James’s philosophy, in chapter 6.

¹³ James, *Will to Believe*, p. 513

¹⁴ James, *Will to Believe*, p. 513

In addition to recent academic works on astrology such as those of Brockbank and Radermacher, precedent for the distinction between astrology-as-science and astrology-as-divination can also be found in the three theories of truth. As has emerged, particularly in chapters four to seven, each of the three theories of truth fissures along an idiographic/nomothetic fault line. This reaches its apogee in the disagreement between Peirce and James on the question of how the pragmatic theory of truth should be characterised. As shown in chapter 7, Peirce argued that science should be the final arbiter of truth whilst James argued that science is only one kind of truth, and devoted much of his philosophical life to exploring and discussing religious experience. In theories of truth, as in astrology, the role of science is disputed.

8.3 Theories of Truth

The three theories of truth which I use in this thesis are open to criticism on the grounds that it is not necessary to analyse truth to such an extent. Thus for example Dawkins argued that ‘Scientists tend to take a robust view of truth and are impatient of philosophical equivocation over its reality or importance.’¹⁵ In chapter 3 I cited Dean et al as (in effect) exponents of naïve realism, according to which it is obvious what is and is not true, with no further discussion being required about what ‘truth’ means. As I argued there, this position is untenable for two reasons. First, if the truth were obvious it would be difficult to account for the need – generally believed to exist by critics – to disabuse many people of belief in astrology’s truth. If the truth is obvious and astrology is not true, it would be obvious that astrology was not true. Second, as I have shown throughout this thesis, many commentators – both critics and advocates of astrology – have used arguments which invoke the central principle of one or more of the three theories of truth, often seemingly without awareness that this is the case. I see no valid way in which any of these commentators could dismiss the need for the three theories of truth, when their own arguments use the principles found in these theories.

Throughout this thesis I have put forward instances in which one or other of the three theories of truth describe the principles at work in discussions of astrology’s truth-status by both astrologers and critics. On the basis of this analysis I conclude that each of the

¹⁵ Richard Dawkins, *A Devil’s Chaplain: Reflections on Hope, Lies, Science and Love* (New York, NY: Mariner, 2004) p. 5.

three theories has a role to play in a discussion about the subject's truth-status; in other words, it is *necessary* to deploy the three theories in order to achieve a full and balanced discussion of astrology's truth-status.

It is often assumed in epistemological discussion that only one theory of truth can be valid, and hence many epistemologists who espouse a particular theory have tried to justify taking that theory as competent to define truth in all situations. This phenomenon was dubbed 'epistemic monism' by Engel.¹⁶ The alternative to taking one or another theory of truth as omniscient is epistemic pluralism, which was introduced in chapter 3 and discussed more fully in chapter 7. This thesis has found epistemic pluralism to be a useful and indeed necessary approach in real-world situations such as the evaluation of astrology's truth-status, since it has emerged that astrology's truth can be, and often is, discussed from the perspective of the three theories of truth, with each shedding light from a different perspective. In the basic terms of the three theories of truth: if astrological propositions correspond to facts then that would support the case for astrology's truth; if the derivation of astrological propositions can be explained as cohering with an overarching explanatory system, then that would (depending on the explanatory system) support or undermine the case for astrology's truth; and if astrology is judged to work, then that would support the case for astrology's truth. The discussion in this thesis has demonstrated that each of these positions can shed light on the truth-status of astrology. This, in a nutshell, is epistemic pluralism as it applies to astrology.

In chapter 7 I argued that although it is sometimes characterised as a recent development in philosophy, epistemic pluralism is an integral part of James's pragmatic theory of truth. Given this, and further given that the three theories have (individually and together) proved sufficient to analyse every extant view of astrology's truth-status, I conclude that the case for the sufficiency of the three theories for an analysis of the kind presented in this thesis is strong. The need to deploy the three theories as a schema in a discussion of this kind is accentuated by the fact that, as has emerged at points throughout this thesis, there is often a mutual suspicion from both astrologers and critics that the other side glosses over arguments and facts which do not conduce to arrival at their preferred conclusion. Just as it would be unacceptable to dismiss experimental

¹⁶ Engel, 'A Plea for Epistemic Monism', p. 96 (previously cited in chapter 7).

data without consideration or explanation, so, I suggest, it should be considered unacceptable to elide any consequences of the three theories of truth without justification.

8.4 The Significance of William James for the Discussion

James was critical of all attempts to enforce a unitary account of truth – as embodied in his discussion of Beethoven quartets, cited above. He therefore provides a precedent within epistemology for challenging the frequent critical claim that ‘the scientific method is the only way of demonstrating the truth of [astrologers’] claims’.¹⁷

Beyond this, the significance of James’s thought for this thesis comes from the confluence in it of two major philosophical themes. The first is his version of the pragmatic theory of truth. This opens out the possibility that if astrology were judged to work, it would by that token be true, whether or not it conformed to other frequently-demanded criteria such as scientific principles or positive statistical findings. From this, the question arises of what types of experience would justify using the phrase ‘astrology works’. This can be addressed by turning to the second theme, which is James’s philosophy of pluralistic pantheism, supported by his principles of pure experience and radical empiricism. This provides an account – ontological, cosmological, theological – of the universe in which the individual human being is a meaningful, connected, part of a larger scheme. As I argued in chapter 6, this can be understood as an elaborated context for astrology-as-divination, which would ‘work’ by bringing to the individual intimations of their non-separation from the larger universe. As Barnard suggested, in James’s philosophy, since

a nondual pluralistic pantheism postulates a self that is simultaneously united with, yet distinct from, an underlying divine presence, it is possible to say, with equal validity, that following intuitive guidance is *both* a way to become attuned to one’s inner promptings *and* a way to align oneself with a distinct, although not ontologically separate, divinity.¹⁸

The argument was developed in chapter 6 of this thesis that James’s pluralistic religious philosophy has the potential to make sense of astrologers’ frequent assertions that their craft is a spiritual phenomenon. As was also discussed, a facet of this is the possibility

¹⁷ Dean et al, *Tests of Astrology*, p. 326 (a similar statement can be found at e.g. Culver and Ianna, *Astrology: True or False?*, p. 28).

¹⁸ Barnard, *Exploring Unseen Worlds*, p. 267

in James's thought to articulate and elaborate upon synchronicity (also frequently cited in an explanatory capacity by astrologers) as a description of the way in which astrology-as-divination functions.

8.5 Is Astrology True?

The question of astrology's truth-status has not been definitively resolved by this thesis. The underlying reason for this is the existence of a more general, and irresolvable, problem for anyone who would attain a once-and-for-all definition of truth. This was framed by Thomas Nagel when he observed that there is no 'view from nowhere' – no source of knowledge that comprehends and transcends individual perspective.¹⁹ This issue has emerged in discussing each theory of truth: it is outside the scope of the correspondence theory of truth to define what will count as a fact; the coherence theory similarly cannot say *which* explanatory scheme propositions should cohere with; and the meaning of 'it works' is a subject of debate by proponents of the pragmatic theory of truth.

What *has* emerged from the discussion in this thesis is the variety of assumptions that underpin, and consequences that follow from, the arguments and evidence that are mustered when astrology's truth-status is discussed. A clear illustration of this context-dependency emerged in chapter 6, through Richard Dawkins's characterisation of the universe as showing 'no design, no purpose... nothing but blind, pitiless indifference'.²⁰ This position specifically precludes him from considering the possibility of a responsive cosmos which might speak through astrology. Dawkins's cosmological and ontological framework thus has direct consequences for his evaluation of astrology's truth-status, and I have shown that this is necessarily the case for anyone who approaches the subject.

What this thesis has demonstrated is that statements about the truth-status of astrology are necessarily conditional, if-then statements. It has also emerged that this conditionality is rarely acknowledged, let alone explored and developed, by either astrologers or critics. In the following two sub-sections I will illustrate this

¹⁹ Nagel, *View from Nowhere*, p. 70. Previously cited and referred to in chapters 1 and 7.

²⁰ Dawkins, *River out of Eden*, p. 133. Previously cited in chapter 6 of this thesis.

conditionality through a recapitulation of the two forms of astrology, and the three theories of truth, which have been discussed throughout this thesis.

8.5.1 Is Astrology-as-Science True?

For astrology-as-science, the ‘facts’ demanded by the correspondence theory of truth would necessarily conform to scientific definition, which is to say they would be intersubjective and resilient under repeated testing. In terms of the coherence theory of truth, the explanatory system with which astrology would need to cohere would be science. An example of what would be required is found in Kanitscheider’s discussion of ‘F-Rays’ – that is, planetary rays which would provide a causal explanatory mechanism for astrological phenomena.²¹

As was discussed in chapter 5, the prospect has been raised by some commentators that discoveries and developments will redefine science to the point that astrology, or some element thereof, becomes scientifically plausible. For instance Michel Gauquelin argued that developments such as chaos theory would provide the basis for a ‘neo-astrology’.²² In that case, a change in the understanding of science would entail a change in the meaning of coherence with science. I argued in chapter 5 that developments in science such as chaos and quantum theories currently have more significance for astrology-as-divination than for astrology-as-science. This follows because, whilst there is as yet no generally-acknowledged pathway opened by such developments to the realisation of an astrological mechanism, a number of them undermine realist accounts of the universe. This has the consequence that the basis upon which applications of classical science can claim to be true shifts from coherence with a known physical universe, to the pragmatic consideration that they work.

Moving on to the pragmatic theory of truth: as was seen in chapter 7, astrology-as-science could be accommodated under either James’s or Peirce’s characterisations of the theory. James’s pluralistic approach however precludes the insistence that astrology (or anything) must work in the sense of functioning as a science, which is the hallmark of Peirce’s account of pragmatism.

²¹ Kanitscheider, ‘A Philosopher looks at Astrology’, previously cited in chapter 5.

²² Gauquelin, *Neo-Astrology*, p. 3, pp. 174 – 8. Previously cited in chapter 5.

8.5.2 Is Astrology-as-Divination True?

In the terms of the coherence theory, the explanatory system that is presupposed by divination is a dialogical/responsive cosmos. A significant part of this thesis, particularly chapters 6 and 7, has been given over to discussion of the ways in which elements of William James's philosophy – particularly his pluralistic pantheism, radical empiricism and pragmatic theory of truth – can accommodate astrology as a divinatory form.

Given this context, the *facts* that emerge from horoscopic readings – and which the correspondence theory requires – can only be evaluated by the individual for her or himself. These are not the intersubjective facts required by Popper. In chapter 6 I argued that the presence, or not, of objective descriptions of the world in chart readings is secondary in a specific sense. My contention is that in order to cohere with, and work in, a pluralist pantheistic cosmos, the experience of being in dialogue with a responsive cosmos must be the primary phenomenon of astrology. I discussed this phenomenon primarily in chapter 6 with reference to Jung's 'mysterium tremendum' as discussed by Radermacher, Hyde's discussion of the 'judder', and James's 'intimacy'.

In a closely related way, the pragmatic requirement that astrology (like everything else) would be true if, and to the extent that, it worked would acquire a different sense from that which follows from the scientific model. Under the account of divination developed here, a *true* astrology would qualify for that epithet not by imparting information – though that is part of the process – but by evoking an awareness within individuals that they participate and interact with the more-than-human.

Given a Jamesian pluralist pantheistic universe, then, the crucial test of whether or not astrology-as-divination worked would be whether a sense of intimacy with this responsive cosmos was engendered through the practice of astrology. As was shown in chapter 7, this is necessarily a subjective judgement. And, crucially, it is also a subjective judgement whether to believe in a responsive cosmos. From this emerges the relevance of James's 'right to believe'.

8.6 The Right to Believe

A recurrent theme in criticisms of astrology is that astrologers are not sufficiently parsimonious with their belief, when they believe in astrology. Thus for example the statements of Dean et al that, in comparison to astrologers, ‘we are more careful. In fact hugely more careful’, and that ‘We want to avoid being misled, and avoiding being misled is part of what being scientific is about’.²³

James’s discussion of the ‘right to believe’ characterises such carefulness as a two-edged sword. As was shown in chapter 7, he saw the view that one should shun a practice whose epistemological status may be doubted (and this could be applied to astrology) as ‘simply an expression (free to anyone to make) of private personal appetite for evidence of a certain peculiar kind.’²⁴ James was accused of relativism on the basis of such statements.²⁵ The overriding point for him however was the pluralistic nature of truth. This is a perspective from which it would be possible, at least in principle, for astrology to be true in a way different from the way in which a law of physics is true. This is a perspective from which, as Gutowski put it, ‘philosophy does not give us any ultimate knowledge but rather justifies our right to believe in this or that vision of the world... By accepting a personalistic ontology, James equips himself with good reasons for scepticism about [the] metaphysical meaning of present scientific results based on naturalistic presumption.’²⁶

Belief in gods, in James’s sense, can be a precursor to experience of the more-than-human, whilst disbelief can exclude the individual from such experience. Both attitudes would then be self-fulfilling prophecies. James summed this up in a homely simile:

just as a man who in a company of gentlemen made no advances, asked a warrant for every concession, and believed no one’s word without proof, would cut himself off by such churlishness from all the social rewards that a more trusting spirit would earn – so here, one who should shut himself up in snarling logicity and try to make the gods extort his recognition

²³ Dean et al in: Phillipson, *Astrology Year Zero*, p.131, p. 132. Previously cited in chapter 7. There is a similar statement in: Dawkins, *Unweaving the Rainbow*, p. 138.

²⁴ James, *Will to Believe*, p. 498

²⁵ Discussed at e.g. Lamberth, *William James and the Metaphysics of Experience*, pp. 217 – 8.

²⁶ Piotr Gutowski, ‘To Be in Truth or not to Be Mistaken?’ in Dariusz Łukasiewicz, Roger Pouivet (eds.), *The Right to Believe: Perspectives in Religious Epistemology* (Frankfurt: Ontos/De Gruyter, 2012) p. 99. I have interpolated ‘[the]’ which was missing from the original.

willy-nilly, or not get it at all, might cut himself off forever from his only opportunity of making the gods' acquaintance.²⁷

If the universe is responsive, so that individuals may interact with it in the way characterised by James as 'intimacy', then the scientific ideal of eliminating bias by excluding merely subjective apprehensions could itself be a form of bias. Whether the universe is really like that is a question that cannot be resolved through a consensual, intersubjective enquiry. The issue of what would constitute allowable evidence for such an enquiry cannot stand outside (in a 'view from nowhere') of ontological and cosmological models developed to describe that universe.

For so long as astrology-as-science is under evaluation, by definition the established paradigm of realist, material science obtains. In that case the implications of a responsive cosmos are not relevant and there is little basis to judge the practice true – as has been witnessed through numerous critical perspectives cited in this thesis. When astrology-as-divination is considered, however, a basis can be seen – which I have explored through James's philosophy in chapters 6 and 7 above – whereby it is philosophically defensible for an individual to assert that, in their experience, astrology works; and on this basis, to consider that astrology is true.

²⁷ James, *Will to Believe*, p. 476.

Bibliography

Abel, Reuben, *Man is the Measure – A Cordial Invitation to the Central Problems of Philosophy* (New York: Free Press/Macmillan, 1976)

Acton, H. B., 'Comte's Positivism and the Science of Society', *Philosophy* Vol. 26 No. 99 (Oct. 1951) pp. 291 – 310.

Addey, John M., 'Astrological Twins' in *The Astrological Journal* Vol. IX No. 1 (Winter 1966 – 67) pp. 14 – 30. (Article reprinted in: John Addey, *Selected Writings*, Tempe, AZ: American Federation of Astrologers, 1976, pp. 54 - 65.)

Addey, John, *Harmonics in Astrology: An introductory text-book to the new understanding of an old science* (Romford: L. N. Fowler, 1976).

Addey, John, 'Michel Gauquelin strikes again (Part 1)', *The Astrological Journal* Vol. XVI No. 3 (Autumn 1974), pp. 2 – 12.

Alcock, James E., 'Give the null hypothesis a chance: Reasons to Remain Doubtful About the Existence of Psi', *Journal of Consciousness Studies* Vol. 10 No. 6 – 7 (2003) pp. 29 – 50.

Alcoff, Linda Martin (ed.), *Epistemology: The Big Questions* (Oxford: Blackwell, 1998).

Alston, William P., 'Ontological Commitments', *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, Vol. 9 No. 1/2 (Jan – Feb 1958) pp. 8 – 17.

American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders* (5th edn.) (Arlington, VA: American Psychiatric Association, 2013)

Anker, Thomas Boysen, *Truth in Marketing: A theory of claim-evidence relations* (London: Routledge, 2016).

Appleby, Derek, *Horary Astrology: The Art of Astrological Divination* (Bel Air, MD: Astrology Classics/The Astrology Center of America, 2005 [1985]).

Aristotle, W. D. Ross (tr.), *Metaphysics* in: Aristotle, Jonathan Barnes (ed.), *The Complete Works of Aristotle: The Revised Oxford Translation, One Volume Digital Edition* (Princeton, NJ: Princeton University Press, 1995 [1984]), pp. 3343 – 3716.

Aristotle, W. D. Ross (tr.), J. O. Urmson (revisions to tr.) *Nicomachean Ethics* in: Aristotle, Jonathan Barnes (ed.), *The Complete Works of Aristotle: The Revised Oxford Translation, One Volume Digital Edition* (Princeton, NJ: Princeton University Press, 1995 [1984]), pp. 3718 – 4009.

Asay, Jamin, *The Primitivist Theory of Truth* (Cambridge: Cambridge University Press, 2013).

- Ashmole, Elias, *Theatrum Chemicum Britannicum* (London, Brooks, 1652).
- Audi, Robert, *Epistemology: A Contemporary Introduction to the Theory of Knowledge* (3rd edn.) (New York: Routledge, 2011)
- Augustine (Saint), Henry Bettenson (tr.), *Concerning the City of God against the Pagans* (London: Penguin, 1984 [1972])
- Augustine (Saint), R. S. Pine-Coffin (tr.), *Confessions* (London: Penguin, 1961)
- Augustine (Saint), 'Of True Religion (*De Vera Religione*)' in: St. Augustine, John H. S. Burleigh (tr.), *Augustine: Earlier Writings* (Philadelphia, PA: Westminster Press, 1953).
- Ayer, A. J., *Language, Truth and Logic* (2nd edn.) (Harmondsworth: Pelican, 1971 [1946]).
- Bacon, Michael, *Pragmatism: An Introduction* (Cambridge: Polity, 2012).
- Bambach, Charles, 'Neo-Kantianism' in: Aviezer Tucker (ed.), *A Companion to the Philosophy of History and Historiography* (Malden, MA: Wiley-Blackwell, 2009).
- Barad, Karen, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007).
- Barbour, Ian G., *Religion in an Age of Science – The Gifford Lectures 1989 – 1991 Volume 1* (London: SCM Press, 1990).
- Barnard, G. William, *Exploring Unseen Worlds: William James and the Philosophy of Mysticism* (Albany, NY: State University of New York, 1997)
- Barnard, G. William, 'The Varieties of Religious Experience: Reflections On Its Enduring Value' in Michel Ferrari (ed.), *The Varieties of Religious Experience: Centenary Essays* (Exeter: Imprint Academic, 2002) pp. 57 – 78.
- Barnes, Barry, David Bloor, John Henry, *Scientific Knowledge: A Sociological Analysis* (London: Athlone Press, 1996)
- Barzun, Jacques, *A Stroll with William James* (Chicago, IL: University of Chicago Press, 1983).
- Beilby, James, *Epistemology as Theology: An Evaluation of Alvin Plantinga's Religious Epistemology* (Aldershot: Ashgate, 2005)
- Beloff, John, 'Mind and Machines: A Radical Dualist Perspective', *Journal of Consciousness Studies* Vol. 1 No. 1, pp. 32 – 37.
- Bennett, Catherine, 'Is Bin Laden a Pisces – or is he Cancer?', *Guardian*, 13th December 2001, p.5.

- Benski, Claude, Dominique Caudron, Yves Galifret, Jean-Paul Krivine, Jean-Claude Pecker, Michael Rouzé, Evry Schatzman with a commentary by J. W. Nienhuys, *The Mars Effect: A French Test of over 1,000 Sports Champions* (Amherst, NY: Prometheus, 1996).
- Bernard, H. Russell, *Research Methods in Anthropology – Qualitative and Quantitative Approaches* (Lanham MD: AltaMira, 2006).
- Bernstein, Richard, ‘The Conflict of Narratives’ in Herman J. Saatkamp Jr. (ed.), *Rorty & Pragmatism – The Philosopher Responds to His Critics* (Nashville: Vanderbilt University Press, 1995), pp. 54 – 67.
- Bird, Alexander, *Philosophy of Science* (London: UCL Press, 1998).
- Bird, Alison Gwendy, *Astrology in Education: An Ethnography* (unpublished doctoral thesis, University of Sussex, 2006).
- Bird, Graham, *William James (The Arguments of the Philosophers)* (New York, NY: Routledge & Kegan Paul, 1986).
- Blackburn, Simon, *Truth – A Guide*, (Oxford: Oxford University Press, 2005).
- Blanshard, Brand, *The Nature of Thought (Vol. 2)* (London: George Allen, 1939)
- Blavatsky, H. P., *Isis Unveiled* (Pasadena: Theosophical University Press, 1977 [1877]).
- Blavatsky, H. P., *The Secret Doctrine* (Pasadena: Theosophical University Press, 1982 [1888]).
- Bless, Robert C., *Discovering the Cosmos* (Sausalito, CA: University Science Books, 1996)
- Bloor, David, ‘Changing Axes: Response to Mermin’, *Social Studies of Science* (Vol.28, No.4, Aug 1998), pp. 624 – 635.
- Bloor, David, *The Enigma of the Aerofoil: Rival Theories in Aerodynamics, 1909 – 1930* (Chicago: University of Chicago Press, 2011)
- Bohm, David, *Unfolding Meaning* (London: Routledge, 1987).
- Bok, Bar J., Lawrence E. Jerome and Paul Kurtz, ‘Objections to Astrology: A Statement by 186 Leading Scientists’, *The Humanist* Vol. 35 No. 5 (Sept – Oct 1975), pp. 4 – 6. Republished in Bart J. Bok and Lawrence E. Jerome, *Objections to Astrology* (Buffalo, NY: Prometheus Books, 1975) pp. 9 – 10.
- Bonjour, Laurence, ‘Coherence Theory of Truth’ in: Robert Audi (ed.), *The Cambridge Dictionary of Philosophy* (2nd edn.) (Cambridge: Cambridge University Press, 1999 [1995]), pp. 153 – 4.

- Born, Max, Albert Einstein; Irene Born (tr.), *The Born-Einstein Letters 1916-1955* (Basingstoke: Macmillan, 2005).
- Boucouvalas, Marcie, 'Intuition: The Concept and the Experience' in Robbie Davis-Floyd and P. Sven Arvidson (eds.), *Intuition: The Inside Story* (New York: Routledge, 1997) pp. 3 – 18.
- Bradley, F. H., 'On Truth and Practice', *Mind* Vol.13, No.51 (July 1904), pp. 309 – 335.
- Bradley, Raymond Trevor, 'Resolving the enigma of nonlocal intuition: a quantum-holographic approach' in: Marta Sinclair (ed.), *Handbook of Intuition Research* (Cheltenham: Edward Elgar, 2011), pp. 197 – 213.
- Brady, Bernadette, *Astrology, a Place in Chaos* (Bournemouth: The Wessex Astrologer, 2006).
- Brady, Bernadette, *The Eagle and the Lark – A Textbook of Predictive Astrology* (York Beach, Maine, Samuel Weiser: 1992).
- Brady, Bernadette, 'The Newtonian Merry-Go-Round' (2004), <https://geocosmic.org/research/the-newtonian-merry-go-round/> (checked 11th May 2017)
- Brady, Bernadette, *Theories of Fate among Present-day Astrologers* (unpublished doctoral thesis, University of Wales Trinity St. David, 2011)
- Braude, Stephen E., *ESP and Psychokinesis: A Philosophical Examination (Revised Edition)* (Parkland, FL: Brown Walker, 2002 [1979])
- Bricmont, Jean, and Alan Sokal, 'Science and Sociology of Science: Beyond War and Peace' in Jay A. Labinger and Harry Collins, *The One Culture? A Conversation about Science* (University of Chicago Press, 2001) pp. 27 - 47.
- Brierley, Michael W., 'The Potential of Panentheism for Dialogue Between Science and Religion' in Philip Clayton (ed.), *The Oxford Handbook of Religion and Science* (Oxford University Press, 2006), pp.635 - 651.
- Brockbank, James, *The Responsive Cosmos: An Enquiry into the Theoretical Foundation of Astrology* (unpublished doctoral thesis, University of Kent, 2011). At <http://www.the9thhouse.org/theses.htm> (checked 13th July 2015).
- 'BrokenHearted88' – public post, 20th March 2017, on: www.beyondblue.org.au/get-support/online-forums/anxiety/anxiety-and-my-astrology-addiction (accessed 17th December 2018).
- Bryman, Alan, *Quantity and Quality in Social Research* (London and New York: Routledge, 2001).

Buddhaghosa (aka Bhadantācariya Buddhaghosa), Bhikkhu Ñāṇamoli (tr.), *The Path of Purification (Visuddhi Magga)* (4th edn.), (Kandy, Sri Lanka: Buddhist Publication Society, 1979 [1956]).

Burgess, Alexis G., John P. Burgess, *Truth* (Princeton, NJ: Princeton University Press, 2011)

Burgt, Robert J. Vanden, *The Religious Philosophy of William James* (Chicago: Nelson-Hall, 1981)

Burke, Keith, *Big Five Personality Traits and Astrology: The Relationship Between the Moon Variable and the Neo PI-R* (PhD thesis, Pacifica Graduate Institute, 2012).

Cabezón, José Ignacio, 'Truth in Buddhist Theology' in Roger Jackson & John Makransky (eds.), *Buddhist Theology – Critical Reflections by Contemporary Buddhist Scholars* (London: RoutledgeCurzon, 2000), pp.136-154.

Campion, Nicholas, *Astrology and Cosmology in the World's Religions* (New York University Press, 2012).

Campion, Nicholas, *Astrology and Popular Religion in the Modern West: Prophecy, Cosmology and the New Age Movement* (Farnham: Ashgate, 2012).

Campion, Nicholas, *The Dawn of Astrology: A Cultural History of Western Astrology – Volume 1: The Ancient and Classical Worlds* (London: Hambledon Continuum, 2008).

Campion, Nick, Garry Phillipson (interviewer), 'Interview with Nick Campion (Part 1)', *The Astrological Journal*, Vol. 41, No. 3, May 1999 (interview recorded 27th March 1998), pp. 8 – 15.

Campion, Nicholas, *The Medieval and Modern Worlds: History of Western Astrology Volume II* (London: Continuum, 2009).

Campion, Nicholas, 'Mythical Moments in the Rectification of History' in: Noel Tyl (ed.), *Astrology Looks at History* (St Paul MN: Llewellyn Publications, 1995) pp. 24 – 63.

Campion, Nicholas, *The Practical Astrologer* (Twickenham: Hamlyn, 1987).

Campion, Nicholas, *Prophecy, Cosmology and the New Age Movement: The Extent and Nature of Contemporary Belief in Astrology* (unpublished doctoral thesis, Bath Spa University College, 2003)

Campion, Nicholas, *What Do Astrologers Believe?* (London: Granta, 2006).

Capra, Fritjof, *The Tao of Physics* (London: Fonana/Collins, 1976 [1975])

Carlson, Shawn, 'A double-blind test of astrology', *Nature* Vol. 318, December 1985 pp. 419 – 425.

Carpenter, Dennis D., 'Emergent Nature Spirituality' in James R. Lewis (ed.), *Magical Religion and Modern Witchcraft* (New York: SUNY Press, 1996) pp. 35 - 72.

Carr, Brian, 'Truth' in G.H.R. Parkinson (ed.), *An Encyclopedia of Philosophy* (London: Routledge, 1988) pp. 76 – 98.

Carter, Charles E. O., *An Encyclopedia of Psychological Astrology* (4th edn.) (London: Theosophical Publishing House, 1954 [1924])

Chaichian, Masud, Hugo Perez Rojas, Anca Tureanu, *Basic Concepts in Physics: From the Cosmos to Quarks* (Dordrecht: Springer, 2014)

Chalmers, A. F., *What is This Thing Called Science?* (3rd edn.) (Buckingham: Open University Press, 1999).

Child, A. B., and I. L. Child, *Religion and Magic in the life of traditional peoples* (Englewood Cliffs, NJ: Prentice Hall, 1997).

Chittick, William C., (ed. & tr.), *Faith and Practice of Islam – Three Thirteenth Century Sufi Texts* (Lahore, Pakistan: Suhail Academy, 2000)

Christino, Karen, *Foreseeing the Future: Evangeline Adams and Astrology in America* (Amherst, MA: One Reed, 2002)

Cicero, Marcus Tullius, *On Divination*, in: Cicero, C.D. Yonge (tr.), *The Nature of the Gods and On Divination* (New York: Prometheus Books, 1997)

Cioffi, Frank, 'Pseudo-science' in Ted Honderich (ed.), *The Oxford Companion to Philosophy* (Oxford University Press, 1995) p. 726.

Clark, Vernon, 'Experimental Astrology', *In Search* Vol. 2 No. 4, Winter 1960, pp. 44 – 69; *In Search* Vol. 3 Nos. 1 & 2, Spring/Summer 1960, pp. 25 – 33; *In Search* (Vol. not numbered) Winter/Spring 1961, pp. 102 – 112. Reprinted as Vernon Clark, 'An investigation of the validity and reliability of the astrological technique', *Aquarian Agent*, Autumn 1970. The *In Search* texts are at: http://www.cosmocritic.com/pdfs/Clark_Vernon_Three_Articles.pdf (accessed 15th September 2019).

Clifford, W. K., 'The Ethics of Belief' in: W. K. Clifford; Leslie Stephen, Frederick Pollock (eds.), *Lectures and Essays by the Late William Kingdon Clifford, F.R.S. Vol. II* (London: MacMillan and Co, 1879), p.186 (originally published in *Contemporary Review*, 1877).

Clynes, Frances, *Cyberspace and Dualism: An Examination of the Impact of the Internet on Modern Western Astrology* (unpublished doctoral thesis, University of Wales Trinity Saint David, 2015).

Coffey, P., *Epistemology or the Theory of Knowledge: An Introduction to General Metaphysics* Vol. 1 (London: Longmans, Green and Co., 1917).

Coliva, Annalisa, Nikolaj Jang Lee Linding Pedersen, 'Introduction' in Annalisa Coliva and Nikolaj Jang Lee Linding Pedersen (eds.), *Epistemic Pluralism* (Cham, Switzerland: Palgrave MacMillan/Springer, 2017) pp. 1 – 19.

Comte, Auguste, J. H. Bridges (tr.), *A General View of Positivism* (London: Trübner and Co, 1865 [1848]).

Comte, Auguste, Harriet Martineau (tr.), *The Positive Philosophy of Auguste Comte* Vols. 1 - 3 (London: George Bell & Sons, 1896 [1830 – 42]). This is an English version – 'Freely translated and condensed' as the title page of volume 1 puts it – of the various texts that made up Comte's *Cours de Philosophie Positive*, published in French between 1830 and 1842.

Connolly, Terry, Hal R. Arkes & Kenneth R. Hammond (eds.) *Judgment and Decision Making: An Interdisciplinary Reader* (2nd edn.) (Cambridge University Press, 2000).

Cooper, John W., *Panentheism – the Other God of the Philosophers* (Nottingham: Apollos/Inter-Varsity, 2007)

Cormier, Harvey, *The Truth is What Works: William James, Pragmatism, and the Seed of Death* (Lanham, MD: Rowman & Littlefield, 2001).

Cornelius, Geoffrey, *Astrology and Divination (the Oslo Paper)* (1982), included in: www.cosmocritic.com/pdfs/Cornelius_Geoffrey_Oslo_and_Moment.pdf (accessed 16th August 2019).

Cornelius, Geoffrey, Maggie Hyde and Chris Webster, *Astrology for Beginners* (Cambridge: Icon, 1995).

Cornelius, Geoffrey, *Field of Omens: A Study in Inductive Divination* (unpublished doctoral thesis, University of Kent, 2009)

Cornelius, Geoffrey, 'From Primitive Mentality to Haecceity: The Unique Case in Astrology and Divination' in Patrick Curry and Angela Voss (eds.), *Seeing with Different Eyes: Essays in Astrology and Divination* (Newcastle: Cambridge Scholars Publishing, 2007).

Cornelius, Geoffrey, *Is Astrology Divination and Does it Matter?* (2000) <http://cura.free.fr/quinq/01gfcor.html> (accessed 17th August 2019). Delivered as a lecture at the United Astrology Congress, Atlanta, GA, 22nd May 1998; revised version published in *The Mountain Astrologer* (Issue 81: Oct – Nov 1998), pp. 38 – 45; published with further minor revisions on the CURA website in 2000.

Cornelius, Geoffrey, *The Moment of Astrology* (2nd edn.) (Bournemouth: Wessex Astrologer, 2003)

Costello, Bridget McKenney, *Astrology in Action: Culture and Status in Unsettled Lives* (unpublished doctoral dissertation, University of Pennsylvania, 2006).

Cotkin, George, 'William James and the Cash-Value Metaphor', *Et Cetera* (Spring 1985) pp. 37 – 46.

Cotkin, George, *William James: Public Philosopher* (Baltimore: Johns Hopkins University Press, 1990)

Cox, David, *I Don't Need to Believe in God – I Know* (London: Guild of Pastoral Psychology, 1985)

Crosby, Donald A., *The Philosophy of William James: Radical Empiricism and Radical Materialism* (Lanham, MA: Rowman & Littlefield, 2013)

Cross, F. L., and E. A. Livingstone (eds), *The Oxford Dictionary of the Christian Church* (3rd edn.) (Oxford University Press, 2005)

Culpeper, Nicholas, *The Judgement of Diseases from the Decumbiture of the Sick* (London: Nath. Brookes, 1655; undated reprint by Ascella (London)).

Culver, Robert B., and Philip A. Ianna, *Astrology: True or False? A Scientific Evaluation* (New York: Prometheus Books, 1988). Originally published as *The Gemini Syndrome: Star Wars of the Oldest Kind* (Tucson: Pachart Publishing, 1979); revisions made for subsequent publication.

Curry, Patrick, 'An Aporia for Astrology' in M. Budd, P. Curry, G. Douglas & B. Jaye, *Radical Astrology* (London, Radical Astrology Group, 1983) 5.2. Published with new introduction at: http://www.cosmocritic.com/pdfs/Curry_Patrick_Aporia.pdf in 2015 (accessed 17th August 2019)

Curry, Patrick, *A Confusion of Prophets: Victorian and Edwardian Astrology*, (London: Collins & Brown, 1992).

Curry, Patrick, 'Astrology' in Kelly Boyd (ed.), *Encyclopaedia of Historians and Historical Writing (Vol.1)* (London: Fitzroy Dearborn, 1999).

Curry, Patrick, *Ecological Ethics: An Introduction* (2nd edn.) (Cambridge: Polity Press, 2011).

Curry, Patrick, 'Embodiment, Alterity and Agency' in Patrick Curry (ed.), *Divination: Perspectives for a New Millennium* (Farnham: Ashgate, 2010).

Curry, Patrick, 'The Historiography of Astrology: A Diagnosis and a Prescription' in Gunther Oestmann, H. Darrel Rutkin and Kocku von Stuckrad (eds.) *Horoscopes and Public Spheres: Essays on the History of Astrology* (Berlin: Walter de Gruyter, 2005), pp. 261 – 274.

Curry, Patrick, *Prophecy and Power* (Cambridge: Polity Press, 1989)

Curry, Patrick: see also, 'Willis, Roy, and Patrick Curry'.

- Da Costa , Newton C. A., Steven French, *Science and Partial Truth: A Unitary Approach to Models and Scientific Reasoning* (Oxford University Press, 2003)
- Darroch, Fiona, *Memory and Myth: Postcolonial Religion in Contemporary Guyanese Fiction and Poetry* (Amsterdam: Rodopi, 2009).
- Darwin, Charles, Francis Darwin (ed.), *The Life and Letters of Charles Darwin Vol. 1* (London: John Murray, 1887)
- Darwin, Charles, *The Origin of Species* (6th edn.) (London: Oxford University Press, 1956 [1872])
- David, Marian, 'Theories of Truth' in Ilkka Niiniluoto, Matti Sintonsen, Jan Woleński (eds.) *Handbook of Epistemology* (Dordrecht: Kluwer, 2004) pp. 331 - 414.
- Davies, P. C. W., and Julian Brown, *Superstrings: A Theory of Everything?* (Cambridge University Press, 1988)
- Davis, Erik, 'The Counterculture and the Occult' in Christopher Partridge (ed.), *The Occult World* (Oxford: Routledge, 2015) p. 635 – 645.
- Dawkins, Richard, *A Devil's Chaplain: Reflections on Hope, Lies, Science and Love* (New York, NY: Mariner, 2004)
- Dawkins, Richard, *The God Delusion* (London: Black Swan, 2007 [2006]).
- Dawkins, Richard, 'The Real Romance in the Stars', *Independent on Sunday*, 31 December 1995, pp.17-18. Reprinted, with footnotes added: *The Astrological Journal* (Vol. 38 No. 3, May/June 1996), pp. 135 - 141.
- Dawkins, Richard, 'Thoughts for the Millennium', *Microsoft Encarta Encyclopedia 2000* (Redmond, WA: Microsoft Corporation, 1993 – 9).
- Dawkins, Richard, *Unweaving the Rainbow: Science, Delusion and the Appetite for Wonder* (London: Allen Lane, 1998).
- Dawson, Neal V., 'Correspondence and coherence in science: a brief historical perspective', *Judgment and Decision Making* Vol. 4 no. 2, March 2009, pp. 126 – 133.
- Dean, Geoffrey, Arthur Mather and Ivan W. Kelly, 'Astrology' in Gordon Stein (ed.), *The Encyclopedia of the Paranormal* (Amherst, NY: Prometheus, 1996) pp. 47 – 99.
- Dean, Geoffrey, Ivan W. Kelly, Arthur Mather and Rudolf Smit, 'Astrology' in Michael Shermer (ed.), *The Skeptic Encyclopedia of Pseudoscience (Volume One)* (Santa Barbara, CA: ABC-CLIO, 2002) pp. 35 – 42.
- Dean, Geoffrey, 'Attribution: a pervasive new artefact in the Gauquelin data' in *Astrology Under Scrutiny*, a special issue of the Dutch journal *Astrologie in Onderzoek* (Vol.13, Issues 1 & 2, October 2000) pp. 1 - 72.

Dean, Geoffrey, 'The Case for and Against Astrology' in Bryan Farha (ed.), *Paranormal Claims: A Critical Analysis* (Lanham, MD: University Press of America, 2007) pp. 115 – 129; reprinted in expanded and re-titled second edition, Bryan Farha (ed.), *Pseudoscience and Deception: The Smoke and Mirrors of Paranormal Claims* (Lanham, MD: University Press of America, 2014) pp. 87 – 106.

Dean, Geoffrey, 'Divination: Astrology shows clear links with divinatory practices' (2013), <http://www.astrology-and-science.com/A-divi2.htm> (accessed 28th August 2019).

Dean, Geoffrey, 'Does Astrology Need to be True? Part 1: A Look at the Real Thing', *The Skeptical Inquirer* Vol. 11 No. 2 (Winter 1986-7), pp.166 - 184.

Dean, Geoffrey, 'Does Astrology Need to be True? Part 2: The Answer is No', *The Skeptical Inquirer* Vol. 11 No. 3 (Spring 1987), pp. 257 – 273.

Dean, Geoffrey A., D. K. B. Nias and C. C. French , 'Graphology, astrology and parapsychology' in Helmuth Nyborg (ed.), *The Scientific Study of Human Nature: Tribute to Hans J. Eysenck at Eighty* (Oxford: Pergamon, 1997) pp. 511 – 542.

Dean, Geoffrey, and Ivan W. Kelly, 'Is Astrology Relevant to Consciousness and Psi?' (2003) www.butterfliesandwheels.org/2003/is-astrology-relevant-to-consciousness-and-psi/ (accessed 20th August 2019). This online version is an expanded version of: Geoffrey Dean and Ivan W. Kelly, 'Is Astrology Relevant to Consciousness and Psi?', *Journal of Consciousness Studies*, Vol. 10 No. 6 – 7 (2003), pp. 175 – 198.

Dean, Geoffrey Dean, Arthur Mather, 'Key Topic 1: Is the Scientific Approach Relevant to Astrology?' *Correlation*, Vol.13 No.1 (1994), pp. 11 - 18.

Dean, Geoffrey, Suitbert Ertel, Ivan Kelly, Arthur Mather, Rudolf Smit, 'The Phillipson Interview: Five leading researchers face 150 questions about scientific research into astrology' (2000, minor revisions 2003) at: www.astrology-and-science.com/d-phil2.pdf and also www.astrozero.co.uk/astroscience/phillintv.pdf (both accessed 28th August 2019).

Dean, Geoffrey, assisted by Arthur Mather and 52 collaborators, *Recent Advances in Natal Astrology: A Critical Review, 1900 – 1976* (Subiaco, Western Australia: Analogic, 1977).

Dean, Geoffrey, Ivan Kelly, Arthur Mather and Rudolf Smit, 'A Reply to Dennis Elwell's "Scholars v Scribblers"' (2001), http://www.astrozero.co.uk/astroscience/researchers_respond_2_1.htm (accessed 15th August 2019). This is part 5 of a discussion between Elwell, Dean et al, and Ertel.

Dean, Geoffrey, Ivan Kelly, Arthur Mather and Rudolf Smit, 'A Reply to Dennis Elwell's "Concerning Ubiquity, Evidence and Hard Hats"' (2001) http://www.astrozero.co.uk/astroscience/researchers_respond_3_1.htm (accessed 15th August 2019). This is part 7 of a discussion between Elwell, Dean et al, and Ertel.

Dean, Geoffrey, Ivan Kelly, Arthur Mather and Rudolf Smit, 'A Reply to Dennis Elwell's "Memo to the Careful Ones"' (2001)

http://www.astrozero.co.uk/astroscience/researchers_respond_4_1.htm (accessed 15th August 2019). This is part 9, the final part, of a discussion between Elwell, Dean et al, and Ertel.

Dean, Geoffrey, Ivan Kelly, Arthur Mather and Rudolf Smit, 'Researchers' Response to Dennis Elwell's Critique' (2001), http://www.astrozero.co.uk/astroscience/researchers_respond.htm (accessed 15th August 2019). This is part 2 of a discussion between Elwell, Dean et al, and Ertel.

Dean, Geoffrey, Arthur Mather, 'Response to Mr. Rudhyar' in 'Astrology: a Review Symposium', *Zetetic Scholar* Nos. 3 & 4, April 1979, p. 98.

Dean, Geoffrey, Arthur Mather, David Nias, Rudolf Smit (principal compilers), *Tests of Astrology: A critical review of hundreds of studies* (Amsterdam: AinO Publications, 2016). The description 'principal compilers' is from p. 2; the contribution of numerous 'helpers' is also acknowledged at p. 1 and by reference throughout the text.

Dean, Geoffrey, 'The Truth of Astrology Competition: A summary of each entry, and some implications for researchers' *Correlation* Vol. 16 No. 2, Northern Winter 1997/8, pp. 40 – 56.

Descartes; Elizabeth S. Haldane, G. R. T. Ross (trs.), *Meditations on First Philosophy*, in: *The Philosophical Works of Descartes, Volume I* (London: Cambridge University Press, 1979 [1911]) pp. 131 – 199.

Descartes, René, Victor Cousin (ed.), *Oeuvres de Descartes* (Vol. 8) (Paris: F. G. Levrault, 1824)

d'Espagnat, Bernard, 'Quantum Logic and Non-separability' in Jagdish Mehler (ed.), *The Physicist's Conception of Nature* (Boston: Kluwer, 1973).

Dessoir, Max, 'Die Parapsychologie', *Sphinx* 8 (June 1889) pp. 341 – 2. (For translation, see: Treitel, Corinna.)

deVore, Nicholas, *Encyclopedia of Astrology* (Totowa, NJ: 1976)

DeWitt, Richard, *Worldviews: An Introduction to the History and Philosophy of Science* (2nd edn.) (Malden, MA: Wiley-Blackwell, 2010 [2004])

Dilley, Frank B., 'A Finite God Reconsidered' in *International Journal for Philosophy of Religion*, Vol. 47, No. 1 (Feb., 2000), pp. 29 – 41.

Diogenes Laertius, R. D. Hicks (tr.), *Diogenes Laertius: Lives of Eminent Philosophers* Vol. 2 (London: William Heinemann, 1925).

Driesch, Hans, 'Presidential Address (1926): Psychical Research and Established Science', *Proceedings of the Society for Psychical Research* Vol. XXXVI (Parts 97 – 103), 1928 pp. 171 – 186, Part 99.

- Driesch, Hans, Theodore Besterman (tr.), *Psychical Research: The Science of the Super-Normal* (London: G. Bell & Sons, 1933)
- C. J. Ducasse, 'Paranormal Phenomena, Nature, and Man', *Journal of the American Society for Psychical Research* Vol. 45 No. 4 (October 1951) pp. 129 – 148.
- C. J. Ducasse, 'The Philosophical Importance of "Psychic Phenomena"', *The Journal of Philosophy*, Vol. 51, No. 25, pp. 810 – 823.
- Duclow, Donald F., 'William James, Mind-Cure, and the Religion of Healthy-Mindedness', *Journal of Religion and Health* Vol. 41 No. 1 (Spring 2002) pp. 45 – 56.
- Duncan, Adrian, *Doing Time on Planet Earth* (Shaftesbury: Element, 1990).
- Duncan, Adrian, 'Is Astrology Reality?' [1999] <https://www.astrowow.com/blog/is-astrology-reality/> (accessed 18th August 2019).
- Duncan, Adrian, *Astrology: Transformation and Empowerment* (Boston, MA: Weiser, 2002)
- Dupré, Louis, *Religious Mystery and Rational Reflection* (Grand Rapids: William B. Eerdmans Publishing, 1998)
- Durkheim, Emile, John B. Allcock (tr.), *Pragmatism and Sociology* (Cambridge University Press, 1983)
- Dwyer, Terry, *How to Write an Astrological Synthesis: A Guide for Students* (Romford: L. N. Fowler & Co., 1985).
- Dwyer, Terry, 'Stop Deluding Yourself' in *Polarity* Vol. 1 No. 1 (August 1990) pp. 2 – 8.
- Dwyer, Terry, 'What's Your Bias? (Parts I and II)', *Astrological Journal* Vol. XXVIII, No. 3 (April 1986), pp. 97 – 9, p. 129, p. 101, and Vol. XXVIII, No. 4 (July 1986), pp. 153 – 158.
- Eagleman, D., *Incognito: The Secret Lives of the Brain* (NY: Pantheon, 2011)
- Eames, Elizabeth Ramsden, *Bertrand Russell's Dialogue with His Contemporaries* (Abingdon: Routledge, 2013 [1989]).
- Eames, S. Morris, 'The Meaning of Truth in James' in: Walter Robert Corti (ed.), *The Philosophy of William James* (Hamburg: Felix Meiner, 1976), pp.157 – 177.
- Ebeling, Florian, David Lorton (tr.) *The Secret History of Hermes Trismegistus* (Ithaca, Cornell University Press, 2007 [2005])
- Elwell, Dennis, 'Concerning Ubiquity, Evidence, and Hard Hats' (2001) http://www.astrozero.co.uk/astroscience/elwell_3.htm (accessed 15th August 2019). This is part 6 of a discussion between Elwell, Dean et al, and Ertel.

Elwell, Dennis, *Cosmic Loom* (2nd edn.), (London: Urania Trust, 1999 [1987]).

Elwell, Dennis, 'Memo to the Careful Ones' (2001)
http://www.astrozero.co.uk/astroscience/elwell_4.htm (accessed 15th August 2019).
This is part 8 of a discussion between Elwell, Dean et al, and Ertel.

Elwell, Dennis, 'The Researchers Researched: A Reply to the Cynics' (2001),
http://www.astrozero.co.uk/astroscience/elwell_1.htm (accessed 15th August 2019).
This is part 1 of a discussion between Elwell, Dean et al, and Ertel.

Elwell, Dennis, 'Scholars versus Scribblers' (2001),
http://www.astrozero.co.uk/astroscience/elwell_2.htm (accessed 15th August 2019).
This is part 4 of a discussion between Elwell, Dean et al, and Ertel.

Engel, Pascal, 'A Plea for Epistemic Monism' in: Annalisa Coliva and Nikolaj Jang Lee Linding Pedersen (eds.), *Epistemic Pluralism* (Cham, Switzerland: Palgrave MacMillan/Springer, 2017) pp. 93 – 126.

Engel, Pascal, *Truth* (Abingdon: Routledge, 2014 [2002])

Englebretsen, George, *Bare Facts and Naked Truths: A New Correspondence Theory of Truth* (Aldershot: Ashgate, 2006).

Ertan, Deniz, *Dane Rudhyar: His Music, Thought, and Art* (Rochester, NY: University of Rochester Press, 2009).

Ertel, Suitbert, 'Appraisal of Shawn Carlson's Renowned Astrology Tests', *Journal of Scientific Exploration*, Vol. 23, No. 2, (2009) pp. 125 – 137.

Ertel, Suitbert, Geoffrey Dean, 'Are Personality Differences Between Twins Predicted by Astrology?', *Personality and Individual Differences*, Vol.21 No.3, 1996, pp.449-454.

Ertel, Suitbert, 'Astrologie und Psi. Fallstudie verstärkt die Zusammenhangshypothese', *Zeitschrift für Anomalistik* Vol. 4 (1 – 3) (2004), pp. 52 – 101.

Ertel, Suitbert, 'Comment from Suitbert Ertel', *Correlation* Vol. 23 No. 1 (2005) pp. 43 – 44.

Ertel, Suitbert, 'Gauquelin planetary effects – brought down to earth? On Geoffrey Dean's dealing with stubborn facts', *Correlation* Vol. 23 (1), (2005), pp. 7 – 33.

Ertel, Suitbert, 'How to Suppress the Gauquelin Mars Effect?', *Correlation* Vol. 15 No.1 (Northern Summer 1996), pp. 2 – 17.

Ertel, Suitbert, 'Is there no Mars effect? The CFEP's verdict scrutinized with the assistance of six independent researchers.' *Correlation* 17 (2), (1998/99), pp.4-23.

Ertel, Suitbert, 'Response to Dennis Elwell's Comments on Gauquelin' (2001).
http://www.astrozero.co.uk/astroscience/ertel_elwell.htm (accessed 15th August 2019).
This is part 3 of a discussion between Elwell, Dean et al, and Ertel.

Eysenck, H. J., D. K. B. Nias, *Astrology: Science or Superstition?* (London: Maurice Temple Smith, 1982).

Faivre, Antoine, 'Hermetic Literature IV: Renaissance – Present' in Wouter J. Hanegraaff (ed.), *Dictionary of Gnosis & Western Esotericism* (Leiden: Brill, 2006), pp.533 – 544.

Farha, Bryan (ed.), *Pseudoscience and Deception: The Smoke and Mirrors of Paranormal Claims* (Lanham, Md.: University Press of America, 2014).

Farnell, Kim, *Flirting with the Zodiac* (Bournemouth: Wessex Astrologer, 2007).

Feibleman, James K., *An Introduction to Peirce's Philosophy: Interpreted as a System* (New York: Harper & Brothers, 1946)

Fernandes, Sergio L. de C., *Foundations of Objective Knowledge: The Relations of Popper's Theory of Knowledge to that of Kant* (Dordrecht: Kluwer, 1985).

Ferrier, James E., *Institutes of Metaphysic: The Theory of Knowing and Being* (Edinburgh: William Blackwood and Sons, 1854).

Feyerabend, Paul, *Against Method* (3rd edn.) (London: Verso, 1993 [1975]).

Feyerabend, Paul, *Science in a Free Society* (London: New Left Books, 1978).

Feyerabend, Paul, *Three Dialogues on Knowledge* (Oxford: Blackwell, 1991).

Ficino, Marsilio, Sears Jayne (tr.), *Commentary on Plato's Symposium on Love* (Woodstock, CT: Spring Publications, 1985).

Ficino, Marsilio, Members of the Language Department of the School of Economic Science, London (tr.), *The Letters of Marsilio Vol. 6* (London: Shephard-Walwyn, 1999).

Ficino, Marsilio, Angela Voss (ed.), *Marsilio Ficino* (Berkeley, CA: North Atlantic Books, 2006)

Fine, Michelle, 'Working the Hyphens: Reinventing Self and Other in Qualitative Research' in N. K. Denzin and Y. S. Lincoln (eds.), *Handbook of Qualitative Research* (1st edn.) (Thousand Oaks, CA: Sage, 1994) pp. 70 – 82.

Fisher, Alec, *The Logic of Real Arguments* (2nd edn.) (Cambridge University Press: 2004 [1998])

Fisk, John, *Edward Livingston Youmans* (New York: Appleton, 1894).

- Flanagan, Owen, 'Consciousness as a Pragmatist Views It', in: Ruth Anna Putnam (ed.), *The Cambridge Companion to William James* (Cambridge: Cambridge University Press, 1997), pp. 25 – 48.
- Flood, Gavin, *Beyond Phenomenology: Rethinking the Study of Religion* (London: Cassell, 1999).
- Flower, Michael Attyah, *The Seer in Ancient Greece* (Berkeley, CA: University of California Press, 2008).
- Ford, Joseph, 'What is Chaos, that we should be mindful of it?' in Paul Davies (ed.), *The New Physics* (Cambridge: Cambridge University Press, 1989) p. 348 - 372.
- Fordham, Michael, *New Developments in Analytical Psychology* (London: Routledge & Kegan Paul, 1957)
- Forrest, John, Deborah Blincoe, *The Natural History of the Traditional Quilt* (Austin, TX: University of Texas Press, 1995).
- Foster, Kenneth R., Peter W. Huber, *Judging Science: Scientific Knowledge and the Federal Courts* (Cambridge, Mass: MIT Press, 1999)
- Frankenberry, Nancy, 'Pantheism' in J. Wentzel Vrede van Huysteen, *Encyclopedia of Science and Religion* (New York: MacMillan Reference USA, 2003), p.645 – 7.
- Frawley, John, 'Neptunia Replies' in *The Astrologer's Apprentice* No.17 (2000), pp. 45 – 6.
- Frawley, John, *The Real Astrology* (London: Apprentice Books, 2000)
- French, Christopher C., Antony Leadbetter & Geoffrey Dean, 'Reply to Roberts', *Journal of Scientific Exploration* Vol.11 No.2 (1997) p.159. Previous entries in this sequence were: Christopher C. French, Antony Leadbetter & Geoffrey Dean, 'The Astrology of Time Twins: A Re-Analysis', *Journal of Scientific Exploration* Vol.11 No.2 pp.147-55; Peter Roberts, 'Commentary on French et al', *Journal of Scientific Exploration* Vol.11 No.2 pp.157-61.
- Fumerton, Richard, *Epistemology* (Malden, MA: Blackwell, 2006).
- Fumerton, Richard A., *Metaepistemology and Skepticism* (Lanham, MA: 1995)
- Fumerton, Richard A., *Realism and the Correspondence Theory of Truth* (Studies in Epistemology and Cognitive Theory) (London: Rowman and Littlefield, 2002)
- Funkenstein, Amos, 'The Polytheism of William James', *Journal of the History of Ideas* Vol.55 No.1 (Jan. 1994), pp.105 – 111.
- Fuzeau-Braesch, Suzel, 'Comments on "Are Personality Differences Between Twins Predicted by Astrology"', S.Ertel and G. Dean', *Personality and Individual Differences*, Vol.21 No.3, 1996, pp.455-457.

Fuzeau-Braesch, Suzel, 'An Empirical Study of An Astrological Hypothesis in a Twin Population', *Personality and Individual Differences*, Vol.13, 1992, pp. 1135 – 1144.

Gale, Richard M., *The Philosophy of William James: An Introduction* (Cambridge University Press, 2005)

Gallup, Alec, Frank Newport (eds.), *The Gallup Poll: Public Opinion 2005* (Lanham, MD: Rowman & Littlefield, 2007)

Gauquelin, Michel and Françoise; Patrice Guinard (curator), 'Archives Gauquelin: Birth and Planetary Data gathered since 1949: <http://cura.free.fr/gauq/17archg.html> (2015 [2001 – 2]) (checked 23rd August 2019).

Gauquelin, Michel, *Cosmic Influences on Human Behavior* (New York: Stein and Day, 1973)

Gauquelin, Michel, *Les Hommes et Les Astres* (Paris: Denöel, 1960).

Gauquelin, Michel, *L'Influence des Astres – Etude Critique et Expérimentale* (Paris: Editions du Dauphin, 1955).

Gauquelin, Michel, *Neo-Astrology: A Copernican Revolution* (London: Arkana, 1991).

Gauquelin, Michel, Sarah Matthews (tr.), *The Truth about Astrology* (Oxford: Blackwell, 1983)

Gauquelin, Michel, Gillian Hargreaves (tr.), *Written in the Stars: The Proven Link Between Astrology and Destiny* (Wellingborough: Aquarian, 1988). This book comprises Gauquelin's first two books: *L'Influence des Astres* and *Les Hommes et Les Astres*, in English translation.

Geertz, Clifford, "'From the Native's Point of View": On the Nature of Anthropological Understanding', *Bulletin of the American Academy of Arts and Sciences*, Vol. 28 No. 1 (Oct. 1974), pp. 26 - 45.

Gert, Joshua, *Normative Bedrock: Response-Dependence, Rationality, and Reasons* (Oxford: Oxford University Press, 2012).

Gettier, Edmund L., 'Is Justified True Belief Knowledge?' in *Analysis*, Vol. 23, No. 6 (Jun., 1963), pp. 121-123.

Gigch, John P. van, *Metadecisions: Rehabilitating Epistemology* (New York: Kluwer Academic, 2003)

Gillett, Roy, 'Astrology, that EU Directive and Consumer Law: An Update and a Response' in *Transit – The Astrologer's Newsletter*, Sept/Oct 2008, pp. 5 – 6.

Gillett, Roy, 'The "middle way" model of astrology: a response to Garry Phillipson's article', *Correlation* Vol 24(1), 2006 pp. 67 – 8.

Gleick, James, *Chaos – Making a New Science* (London: Abacus, 1993).

Glick, Peter, Deborah Gottesman, Jeffrey Jolton, 'The Fault is Not in the Stars: Susceptibility of Skeptics and Believers in Astrology to the Barnum Effect', *Personality and Social Psychology Bulletin*, Vol. 15 No. 4, 1989, pp. 572 - 583.

Gorsuch, Richard L., *Integrating Psychology and Spirituality?* (Westport, Conn: Praeger, 2002).

Gould, Stephen Jay, *Wonderful Life – The Burgess Shale and the Nature of History* (London: Vintage, 2000)

Grafton, Anthony, *Cardano's Cosmos: The Worlds and Works of a Renaissance Astrologer* (Cambridge, Mass: Harvard University Press, 1999)

Greenbaum, Dorian Gieseler, *The Daimon in Hellenistic Astrology: Origins and Influence* (unpublished doctoral dissertation, The Warburg Institute, University of London, 2009).

Greene, Liz, *Astrology for Lovers* (San Francisco CA: Weiser, 2008 [1989]).

Greene, Liz, and Howard Sasportas, *Dynamics of the Unconscious* (London: Arkana, 1988).

Greene, Liz, Nicholas Champion (interviewer), 'An Interview with Liz Greene – Part Two: The Lens of Astrology', *The Mountain Astrologer* (Issue 101, Feb/Mar 2002) pp. 35 – 44.

Greene, Liz, 'Is Astrology a Divinatory System?', *Culture and Cosmos: A Journal of the History of Astrology and Cultural Astronomy* Vol. 12 No. 1 (Spring/Summer 2008), pp. 3 – 29.

Greenwood, Susan, *Magic, Witchcraft and the Otherworld* (Oxford: Berg, 2000).

Gregory, Pam, *You Don't Really Believe in Astrology, Do You? How astrology can reveal profound patterns in your life.* (Bloomington: AuthorHouse, 2013)

Grim, Patrick, 'General Introduction' in: Patrick Grim (ed.), *Philosophy of Science and the Occult* (2nd edn.) (Albany, NY: State University of New York, 1990), pp. 1 – 12.

Grote, John, *Exploratio Philosophica: Rough Notes on Modern Intellectual Science, Part 1* (Cambridge: Deighton, Bell & Co, 1865)

Grover, Dorothy, 'On Locating Our Interest in Truth' in Richard Schantz (ed.), *What is Truth? (Current Issues in Theoretical Philosophy, Vol. 1)* (Berlin: de Gruyter, 2001) pp.120 – 133.

- Guinard, Patrice, Matyas Becvarov (tr.), *Astrology: The Manifesto*, <http://cura.free.fr/07athem1.html> (checked 8th August 2019). The Manifesto is presented in four parts; this link is for the first part (1/4) and includes links to the three other parts (2/4 3/4 and 4/4). The text is based on Guinard's doctoral thesis, *L'Astrologie: Fondements, Logique et Perspectives* (Paris, Sorbonne: 1993).
- Gunzburg, Darrelyn, 'The Horoscopic Place: The Encounter between Astrologer and Client', *Journal for the Study of Religion, Nature and Culture*, Vol. 13 No. 1 (March 2019), pp. 44 – 60.
- Gutowski, Piotr, 'To Be *in Truth* or not to Be *Mistaken?*' in Dariusz Łukasiewicz, Roger Pouivet (eds.), *The Right to Believe: Perspectives in Religious Epistemology* (Frankfurt: Ontos/De Gruyter, 2012) pp. 85 – 102.
- Haack, Susan, *Manifesto of a Passionate Moderate: Unfashionable Essays* (University of Chicago Press, 1998)
- Haack, Susan, 'Pragmatism,' in: Nicholas Bunnin, E. P. Tsui-James (eds.), *The Blackwell Companion to Philosophy* (2nd edn.) (Malden, MA: Blackwell, 2003 [1996]) pp. 774 – 789.
- Hacohen, Malachi Haim, *Karl Popper – The Formative Years, 1902 – 1945: Politics and Philosophy in Interwar Vienna* (Cambridge University Press: 2000)
- Hales, Steven D., *A Companion to Relativism* (Malden, MA: Wiley-Blackwell, 2011).
- Hamblin, David, 'Astrology as Religion' (Letter), *Astrological Journal* Vol. 32 No. 6; November/December 1990, p. 406.
- Hamlyn, D. W., 'History of Epistemology' in Ted Honderich (ed.), *The Oxford Companion to Philosophy* (Oxford University Press, 1995) pp. 242 - 245.
- Hand, Robert, 'Foreword' in Olivia Barclay, *Horary Astrology Rediscovered: A Study in Classical Astrology* (West Chester, PA: Whitford Press, 1990), pp. 13 – 18.
- Hand, Robert, 'The Proper Relationship of Astrology and Science – Part II. The 1989 Carter Memorial Lecture.' *The Astrological Journal* Vol. XXXII no. 2 (March/April 1990) p.95 – 103.
- Hansson, Sven Ove, 'Defining Pseudoscience and Science' in Massimo Pigliucci and Maarten Boudry (eds.), *Philosophy of Pseudoscience: Reconsidering the Demarcation Problem* (Chicago, IL: University of Chicago Press, 2013), pp. 61 – 78.
- Harding, Mike, 'Dean has no understanding of either linguistic or continental philosophy' (letter), *Correlation*, Letter Vol. 17 No. 1, Northern Summer 1998, pp. 54 – 56.
- Harding, Michael, *Hymns to the Ancient Gods* (London: Arkana, 1992)

- Harding, Mike, 'The Truth of Astrology', *The Astrological Journal* Vol. 39 No. 6, Nov/Dec 1997 pp. 14 – 18.
- Harman, P. M., *The Scientific Revolution* (London: Methuen, 1983).
- Harrington, Anne, 'Introduction' in Anne Harrington (ed.), *The Placebo Effect: Interdisciplinary Exploration* (Cambridge, Mass: Harvard University, 1997), pp. 1 – 11.
- Harrison-Barbet, Anthony, *Mastering Philosophy (2nd Ed.)* (Basingstoke: Palgrave, 2001)
- Harvey, Charles, 'Ideal Astrology' in A. T. Mann (ed.), *The Future of Astrology* (London: Unwin Hyman, 1987) pp. 71 – 80.
- Heidegger, Martin, Ted Sadler (tr.), *The Essence of Truth: On Plato's Cave Allegory and Theaetetus* (London: Continuum, 2002 [1988 as *Vom Wesen der Wahrheit*])
- Heidegger, John Sallis (tr.), 'On the Essence of Truth' in: Martin Heidegger, William McNeill (ed.), *Pathmarks* (Cambridge University Press, 1998 [1967 as *Wegmarken*]) pp. 136 – 154.
- Heisenberg, Werner, *Physics and Philosophy – The Revolution in Modern Science* (New York: Harper, 1958)
- Heraclitus, Philip Wheelwright (tr.), *Heraclitus* (Princeton University Press, 1959).
- Herrick, James A., *The Making of the New Spirituality: The Eclipse of the Western Religious Tradition* (Downers Grove, IL: InterVarsity Press, 2003)
- Hick, John, *God and the Universe of Faiths (2nd ed.)* (Oxford: Oneworld, 1993)
- Hick, John, 'Ineffability', *Religious Studies*, Vol. 36, No. 1 (Mar 2000) pp. 35 – 46.
Hick, John, *Dialogues in the Philosophy of Religion (2nd ed.)* (Basingstoke: Palgrave MacMillan, 2010 [2001])
- Holbraad, Martin, 'Definitive evidence, from Cuban gods', *The Journal of the Royal Anthropological Institute* Vol. 14 (2008) pp. 93 – 109.
- Holbraad, Martin, *Truth in Motion: The Recursive Anthropology of Cuban Divination* (Chicago, IL: University of Chicago Press, 2012)
- Hollingworth, Miles, *Saint Augustine of Hippo: An Intellectual Biography* (London: Bloomsbury, 2013)
- Horwich, Paul, Richard Marshall (interviewer), 'Deflationism and Wittgenstein' (2014) <https://316am.site123.me/articles/deflationism-and-wittgenstein?c=end-times-archive> (accessed 22nd August 2019)
- Horwich, Paul, 'Theories of Truth' in: Jonathan Dancy and Ernest Sosa (eds.), *A Companion to Epistemology (2nd edn.)* (Malden, MA: 2010 [1992]) pp. 772 – 777.

- Horwich, Paul, 'Williamson's *Philosophy of Philosophy*', *Philosophy and Phenomenological Research* Vol. LXXXII No. 2, March 2011, pp. 524 – 533.
- Hospers, John, *An Introduction to Philosophical Analysis* (2nd edn.), (London: Routledge and Kegan Paul, 1967 [1956]).
- Huemer, Michael, 'Foundations and Coherence' in Jonathan Dancy, Ernest Sosa and Matthias Steup (eds), *A Companion to Epistemology* (2nd edn.), (Oxford: Blackwell, 2010), pp. 22 – 33.
- Hufford, David J., 'The Scholarly Voice and the Personal Voice: Reflexivity in Belief Studies', *Reflexivity in Belief Studies*, *Western Folklore* Vol. 54, No. 1 (Jan 1995) pp. 57 – 76.
- Hume, David, Ernest C. Mossner (ed.), *A Treatise of Human Nature* (Harmondsworth: Penguin, 1969 [1739 – 40]).
- Humphrey, Caroline, 'Insider-Outsider: Activating the Hyphen', *Action Research* Vol. 5 (1) 2007, pp. 11 - 26.
- Hunter, Kelley, *In Search of Dark Mat(t)er: A Mythopoetic Study in Imaginal Cosmology* (unpublished doctoral thesis, Empresarial University, Costa Rica, 2003).
- Huxley, T. H., contribution to 'A Modern Symposium' on 'The Influence upon Morality of a Decline in Religious Belief' in: *Nineteenth Century* 1 (May 1877), pp. 536 – 539.
- Hyde, Maggie, 'The Judder Effect—Astrology and Alternative Reality' in *The Astrological Journal*, vol.43 no.5, Sept/Oct 2001, pp. 48 – 53.
- Hyde, Maggie, *Jung and Astrology* (London: Aquarian/Harper Collins, 1992).
- Ingraham, Richard Lee, *A Survey of Nonlinear Dynamics ("Chaos Theory")* (Singapore: World Scientific Publishing, 1992)
- Inwagen, Peter van, "It Is Wrong, Everywhere, Always, and for Anyone to Believe Anything upon Insufficient Evidence" in: Jeff Jordan and Daniel Howard-Snyder (eds.) *Faith, Freedom and Rationality: Philosophy of Religion Today* (Lanham MD.: Rowman & Littlefield, 1996) pp. 137 – 153.
- Ingthorsson, R. D., *McTaggart's Paradox* (New York: Routledge, 2016)
- International Society for Astrological Research (ISAR), 'Ethical Standards and Guidelines (Version 5 Revised December 2007; Original Version Published in 2001' p. 1 from www.isarastrology.com/code-of-ethics (accessed 21st December 2018).
- Ionescu, Cristina, *Plato's Meno: An Interpretation* (Lanham, MD: Lexington Books, 2007)

Isidore of Seville; Stephen A. Barney, W. J. Lewis, J. A. Beach and Oliver Berghof (trs.), *The Etymologies of Isidore of Seville* (Cambridge University Press, 2007).

Jackson, Michael, *The Politics of Storytelling: Variations on a Theme by Hannah Arendt* (2nd edn.) (Copenhagen: Museum Tusulanum Press, 2013).

Jackson, Roger R., *Is Enlightenment Possible? Dharmakīrti and rGyal tshab rje on Knowledge, Rebirth, No-Self and Liberation* (New York: Snow Lion Publications, 1993)

Jahoda, Gustav, *The Psychology of Superstition* (London: Allen Lane/Penguin, 1969)

James, Edward W., ‘On Dismissing Astrology and Other Irrationalities’ in: Patrick Grim (ed.), *Philosophy of Science and the Occult* (2nd edn.) (Albany, NY: State University of New York, 1990), pp. 28 – 36.

James, William, ‘The Confidences of a “Psychical Researcher”’ in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1909]) pp. 1250 - 1265.

James, William; Ignas K. Skrupskelis and Elizabeth M. Berkeley (eds.), *The Correspondence of William James: Volume 4, 1856 – 1877* (Charlottesville, VA: University Press of Virginia, 1995).

James, William; Ignas K. Skrupskelis and Elizabeth M. Berkeley (eds.), *The Correspondence of William James: Volume 6, 1885 – 1889* (Charlottesville, VA: University Press of Virginia, 1998).

James, William, ‘Does “Consciousness” Exist?’ in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1904]) pp. 1141 – 1158.

James, William; Frederick H. Burkhardt, Fredson Bowers, Ignas K. Skrupskelis (eds.), *Essays, Comments, and Reviews (The Works of William James)* (Cambridge, Mass: Harvard University Press, 1987).

James, William, ‘Humanism’, in: William James, Ralph Barton Perry (ed.), *Collected Essays and Reviews by William James* (London: Longmans, Green and Co., 1920), pp.448 – 452. Originally published in: *Nation*, 78, 1904, pp. 175 – 6.

James, William, ‘Is Life Worth Living’, in: James, William, *The Will to Believe and Other Essays in Popular Philosophy* in: William James, Gerald E. Myers (ed.), *William James: Writings 1878 – 1899* (New York, NY: The Library of America, 1992 [1895]) pp. 480 – 503.

James, William, *The Meaning of Truth: A Sequel to ‘Pragmatism’* in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1909]) pp. 821 – 978.

James, William, 'Mr Pitkin's Refutation of "Radical Empiricism"' in: William James, *Essays in Radical Empiricism* (Mineola, NY: Dover, 2003 [1912]) pp. 127 – 8. Originally in: *Journal of Philosophy, Psychology and Scientific Methods*, Vol. 3 No. 26 (20th December 1906), p.712.

James, William, Stanley Appelbaum (tr.), 'The Notion of Consciousness' in: William James, *Essays in Radical Empiricism* (Mineola, NY: Dover, 2003 [1912 as 'La Notion de Conscience']) pp. 109 – 122.

James, William, 'On the Function of Cognition', *Mind* Vol. 10, No. 37 (Jan. 1885) pp. 27 – 44.

James, William, 'Phenomenalism' (1879 – 80), in: William James; Frederick H. Burkhardt, Fredson Bowers, Ignas K. Skrupskelis (eds.), *Manuscript Essays and Notes (The Works of William James)* (Cambridge, Mass.: Harvard University Press), pp. 170 – 9.

James, William, 'Philosophical Conceptions and Practical Results' in: William James, Gerald E. Myers (ed.), *William James: Writings 1878 – 1899* (New York, NY: The Library of America, 1992 [1898]) pp. 1077 – 1097.

James, William, *A Pluralistic Universe* in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1909]) pp. 625 – 819.

James, William, *Pragmatism: A New Name for Some Old Ways of Thinking* in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1907]) pp. 479 – 624.

James, William, *The Principles of Psychology* Vols. I and II (New York: Henry Holt and Company, 1890).

James, William, 'Reflex Action and Theism', in: William James, Gerald E. Myers (ed.), *William James: Writings 1878 – 1899* (New York, NY: The Library of America, 1992 [1881]) pp. 540 - 565. Originally published in: *Unitarian Review* XVI, November 1881 pp. 389 – 416, subsequently quoted in: James, *Principles of Psychology* Vol II, p. 635 and reprinted in: James, *The Will to Believe and Other Essays* (London: Longmans Green, 1897) pp. 111 - 144.

James, William, 'Remarks on Spencer's Definition of Mind as Correspondence' in: William James; Frederick H. Burkhardt, Fredson Bowers, Ignas K. Skrupskelis (eds.), *Essays in Philosophy (The Works of William James)* (Cambridge, Mass: 1978 [1878]), pp. 7 – 22. Originally published in: *Journal of Speculative Philosophy*, 12 (January 1878), pp. 1 – 18.

James, William, 'Sargent's "Planchette"' in: William James, Ralph Barton Perry (ed.), *Collected Essays and Reviews by William James* (London: Longmans, Green & Co., 1920) pp. 1 – 2. Article originally published in the *Boston Daily Advertiser*, 10th March 1869.

- James, William, *Some Problems of Philosophy: A Beginning of an Introduction to Philosophy* in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1911]) pp. 979 – 1106.
- James, William, ‘Talks to Teachers on Psychology, and to Students on Some of Life’s Ideals’ in: William James, Gerald E. Myers (ed.), *William James: Writings 1878 – 1899* (New York, NY: The Library of America, 1992 [1899]) pp. 705 – 887.
- James, William, *The Varieties of Religious Experience: A Study in Human Nature* (New York, NY: Penguin, 1982 [1902]).
- James, William, Frederick Burkhardt (ed.), Fredson Bowers (ed.), *The Works of William James: The Varieties of Religious Experience* (Cambridge, MA: Harvard University Press, 1985). This volume is referred to only for the editor’s comments.
- James, William, ‘What Psychical Research Has Accomplished’ (Compiled from articles published in 1890, 1892 and 1896, and published in: William James, *The Will to Believe and Other Essays in Popular Philosophy* in: William James, Gerald E. Myers (ed.), *William James: Writings 1878 – 1899* (New York, NY: The Library of America, 1992 [1896]) pp. 680 – 700.
- James, William, *The Will to Believe and Other Essays in Popular Philosophy* in: William James, Gerald E. Myers (ed.), *William James: Writings 1878 – 1899* (New York, NY: The Library of America, 1992 [1896]) pp. 445 – 704.
- James, William, ‘A World of Pure Experience’, in: William James, Bruce Kuklick (ed.), *William James: Writings 1902 – 1910* (New York, NY: The Library of America, 1987 [1904]) pp. 1159 – 1182. Originally published in two parts in *The Journal of Philosophy, Psychology and Scientific Methods*: Vol. 1 No. 20 (September 29, 1904), pp. 533 – 543; and Vol. 1 No. 21 (October 13, 1904), pp. 561 – 570.
- Jarvie, I. C., ‘The Justificationist Roots of Relativism’ in Charles M. Lewis (ed.), *Relativism and Religion* (New York, NY: Palgrave MacMillan, 1995) pp. 52 – 70.
- Jayatileke, K. N., *Early Buddhist Theory of Knowledge* (Delhi: Motilal Banarsidass, 1963).
- Jayne, Charles A. Jr., ‘Forward’ in: Marcia Moore, *Astrology Today: A Socio-Psychological Survey (Research Bulletin No. 2, Astrological Research Associates)* (New York: Lucis Publishing, 1960), pp. i – v.
- Joachim, Harold H., *The Nature of Truth: an Essay by Harold H. Joachim* (Oxford: Clarendon, 1906).
- John of the Cross (Saint), *The Ascent of Mount Carmel* in: St John of the Cross; Kieran Kavanaugh, Otilio Rodriguez (trs.), *The Collected Works of St. John of the Cross* (Washington, DC: ICS Publications, 1979), pp.65 – 292.
- Johnson, Lawrence E., *Focusing on Truth* (London: Routledge, 1992).
- Johnston, Sarah Iles, *Ancient Greek Divination* (Chichester: Wiley/Blackwell, 2008).

Jones, Marc Edmund, *Horary Astrology* (2nd Edn.) (Shambhala, Berkeley CA, 1971 [1943])

Jones, Roger S., *Physics as Metaphor* (London: Abacus, 1983).

Jopling, David A., *Talking Cures and Placebo Effects* (Oxford University Press, 2008).

Jung, C. G., 'Commentary on "The Secret of the Golden Flower"' [1938] in: C. G. Jung, R. F. C. Hull (tr.), *Alchemical Studies (The Collected Works of C. G. Jung Vol. 13)* (Princeton, NJ: Princeton University Press, 1983 [1967]) pp. 1 – 56, with illustrations that follow on pp. A.1 – A10.

Jung, C. G., 'Flying Saucers: A Modern Myth' in: C. G. Jung, R. F. C. Hull (tr.), *Civilization in Transition: The Collected Works of C. G. Jung Volume 10* (2nd edn.) (London: Routledge & Kegan Paul, 1970 [1958 as *Ein moderner Mythos: Von Dingen, die am Himmel gesehen werden*]).

Jung, C. G., 'Foreword' to: Fanny Moser, *Spük: Wahrglaube oder Irrglaube?* in: C. G. Jung, Gerhard Adler (ed.), R. F. C. Hull (tr.), *The Symbolic Life (Collected Works of C. G. Jung Vol. 18)* (London: Routledge and Kegan Paul, 1976 [1950]) pp. 317 - 326, paras. 757 – 781.

Jung, C. G., 'Foreword to the "I Ching"' [1950] in: C. G. Jung, R. F. C. Hull (tr.), *C. G. Jung – Collected Works, Volume 11, Psychology and Religion: West and East* (New York: Pantheon, 1958) pp.589 – 608.

Jung, C. G.; G. Adler & A Jaffé (eds.), R. F. C. Hull (tr.), *C. G. Jung: Letters (Vol. 1), 1906 – 1950* (London: Routledge & Kegan Paul, 1973).

Jung, C. G.; Gerhard Adler, Aniela Jaffé (eds.); R. F. C. Hull (tr.), *C. G. Jung: Letters (Vol. 2), 1951 - 1961* (London: Routledge & Kegan Paul, 1976).

Jung, C. G., *Mysterium Coniunctionis: An Inquiry into the Separation and Synthesis of Psychic Opposites in Alchemy* in: C. G. Jung, R. F. C. Hull (tr.), *Mysterium Coniunctionis: The Collected Works of C. G. Jung Volume 14* (2nd edn.) (Princeton, NJ: 1970).

Jung, C. G., 'On Synchronicity' [1951] in: C. G. Jung, R. F. C. Hull (tr.), *C. G. Jung – Collected Works, Volume 8, The Structure and Dynamics of the Psyche* (2nd edn.) (London: Routledge & Kegan Paul, 1969 [1960]), pp. 520 – 531.

Jung, C. G.; R. F. C. Hull, H. G. Baynes (trs.), *Psychological Types (Collected Works of C. G. Jung Vol. 6)* (Princeton, NJ: Princeton University Press, 1971).

Jung, C. G., 'Richard Wilhelm: In Memoriam' in: C. G. Jung, R. F. C. Hull (tr.), *The Spirit in Man, Art, and Literature: The Collected Works of C. G. Jung Volume 15* (Princeton, NJ: Princeton University Press, 1966 [1957 as 'Nachruf für Richard Wilhelm', *Das Geheimnis der goldenen Blüte: Ein chinesisches Lebensbuch* (5th edn.) (Zurich: Rascher)], pp. 53 – 62 [74 – 96].

Jung, C. G., 'Synchronicity: An Acausal Connecting Principle' [1952] in: C. G. Jung, R. F. C. Hull (tr.), *The Structure and Dynamics of the Psyche: Collected Works Vol. 8* (2nd Edition) (London: Routledge, 1969 [1960]), pp. 417 - 519.

Kahneman, D., *Thinking, Fast and Slow* (NY: Farrar, Strauss, and Giroux, 2011)

Kanitscheider, Bernulf, 'A Philosopher looks at Astrology', *Interdisciplinary Science Reviews* (1991), Vol. 16 No. 3, pp. 258 - 266.

Kant, Immanuel, Norman Kemp Smith (tr.), *Immanuel Kant's Critique of Pure Reason* (London: Macmillan, 1973 [1929/1787]).

Kant, Immanuel; Emanuel F. Goerwitz (tr.), Frank Sewall (ed.), *Kant's Dreams of a Spirit Seer, Illustrated by Dreams of Metaphysics* (London: Swan Sonnenschein, 1900 [1766])

Karcher, Stephen, *Total I Ching: Myths for Change* (London: Time Warner, 2003).

Kaufmann, Walter, *Critique of Religion and Philosophy* (Princeton University Press, 1958).

Keepin, William, 'Astrology and the New Physics', *The Mountain Astrologer* Oct/Nov 2009, pp. 36 - 47. (This is a slightly revised version of: William Keepin, 'Astrology and the New Physics', *The Mountain Astrologer* Aug/Sept 1995, pp. 12 - 21).

Kelly, Edward F., 'Parapsychology in Context: The Big Picture' in Etzel Cardeña, John Palmer and David Marcusson-Clavertz, *Parapsychology: A Handbook for the 21st Century* (Jefferson NC: McFarland, 2015), pp. 30 - 41.

Kelly, Ivan W., G. A. Dean & D. H. Saklofske, 'Astrology: A Critical Review' in Patrick Grim (ed.), *Philosophy of Science and the Occult* (2nd edn.) (State University of New York Press: 1990) pp. 51 - 84.

Kelly, Ivan W., Roger Culver, Peter J. Loftson, 'Astrology and science: an examination of the evidence' in S. K. Biswas, D. C. V. Mallik, C. V. Vishveshwara, *Cosmic Perspectives: Essays dedicated to the memory of M. K. V. Bappu* (Cambridge University Press, 1989), pp. 207 - 232.

Kelly, Ivan W., 'Astrology, Cosmobiology, and Humanistic Astrology' in Patrick Grim (ed.), *Philosophy of Science and the Occult* (State University of New York Press: 1982) pp. 47 - 70.

Ketland, Jeffrey, 'Truth' in John Shand (ed.), *Central Issues of Philosophy* (Chichester: Wiley-Blackwell, 2009) pp. 10 - 23.

Kirk, Robert, *Relativism and Reality: A Contemporary Introduction* (London: Routledge, 1999).

Kirkham, Richard L., *Theories of Truth* (Cambridge, Mass: The MIT Press, 1995).

Knapp, Krister Dylan, *William James: Psychological Research and the Challenge of Modernity* (Chapel Hill, NC: University of North Carolina Press, 2017).

Knight, Thomas S., Charles Peirce (New York, NY: Twayne, 1965)

Kochunas, Brad, *The Astrological Imagination: Where Psyche and Cosmos Meet* (Bloomington, IN: iUniverse, 2008)

Kollerstrom, Nick, 'How Ertel Rescued the Gauquelin Effect', *Correlation* Vol. 23 No. 1 (2005), pp.34 – 43.

Kosarin, Jenni, *The Everything Astrology Book: Follow the stars to find love, success, and happiness!* (2nd edn.) (Avon, Mass: Adams Media, 2006 [1999]).

Kozlova, Elena, *A Phenomenological Enquiry into the Process and Effects of Finding Meaning with Astrological Symbolism* (unpublished doctoral thesis, Institute of Transpersonal Psychology – Palo Alto, CA, 2011).

Kripke, Saul A., 'On Two Paradoxes of Knowledge' in *Philosophical Troubles: Collected Papers Volume 1* (Oxford: Oxford University Press, 2011), pp. 27 – 51.

S. Krippner, 'Parapsychology and Postmodern Science' in D. R. Griffin (ed.) *The Reenchantment of Science: Postmodern Proposals* (Albany NY: SUNY Press, 1988) pp. 129 – 140.

Kuhn, Thomas, 'Logic of Discovery or Psychology of Research?' in: Imre Lakatos & Alan Musgrave (eds), *Criticism and the Growth of Knowledge: Proceedings of the International Colloquium in the Philosophy of Science, London, 1965, volume 4* (Cambridge: Cambridge University Press, 1970) pp. 1 - 23. (Subsequently reprinted in: in Thomas Kuhn, *The Essential Tension – Selected Studies in Scientific Tradition and Change* (University of Chicago Press: 1977), pp. 266 – 292.)

Kuhn, Thomas, *The Structure of Scientific Revolutions* (3rd edn.) (University of Chicago Press, 1996 [1962]).

Lamberth, David C., *William James and the Metaphysics of Experience* (Cambridge University Press, 1999).

Laudan, Larry, 'The Demise of the Demarcation Problem' in: Michael Ruse, (ed.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (Amherst, NY: Prometheus, 1996) pp. 337 – 350. (Originally in: Cohen, R. S., L. Laudan, *Physics, Philosophy and Psychoanalysis: Essays in Honor of Adolf Grünbaum* (Dordrecht: D. Reidel Publishing Company, 1983) pp. 111 – 127.)

Laudan, Larry, *Science and Relativism: Some Key Controversies in the Philosophy of Science* (Chicago, IL: University of Chicago Press, 1990).

Laudan, Larry, 'Science at the Bar – Causes for Concern' in: Michael Ruse, (ed.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy*

(Amherst, NY: Prometheus, 1996) pp. 351 – 355. (Originally in: *Science, Technology & Human Values* Vol. 7 No. 4 (1982), pp. 16 – 19.)

Leo, Alan, *Esoteric Astrology* (London: L.N. Fowler, 1913).

Leo, Alan, *How to Judge a Nativity* (2nd edn.) (London: L.N. Fowler, 1908 [1904]).

Levine, Michael P., *Pantheism – a non-theistic concept of deity* (London: Routledge, 1994)

Levine, Rick, Jeff Jawer, *Your Astrology Guide 2010* (New York: Sterling, 2009)

Levinson, Henry Paul, *The Religious Investigations of William James* (Chapel Hill, NC: University of North Carolina Press, 1981).

Levy, Donald, 'Macrocosm and Microcosm' [1967]in: Donald M. Borchert (ed.), *Encyclopedia of Philosophy* (2nd edn.) (New York: Thomson Gale, 2006) Vol.5, pp. 639 - 643.

Lévy-Bruhl, Lucien, P. Rivièrè (tr.), *The Notebooks on Primitive Mentality* (Oxford: Basil Blackwell, 1975)

Lewis, Jim, 'And the Future Will be Nothing Less Than the Flowering of Our Inwardness' in A. T. Mann (ed.), *The Future of Astrology* (London: Unwin Hyman, 1987), pp. 115 - 127.

Lilly, William, *Christian Astrology* (facsimile edition) (London: Regulus, 1985 [1647]).

Lilly, William, *William Lilly's History of His Life and Times, from the year 1602 to 1681* (London: Charles Baldwin, 1715 [1681])

Lindberg, David C., *The Beginnings of Western Science – The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to A.D. 1450* (2nd edn.) (University of Chicago Press, 2007).

Linden, Stanton J., *The Alchemy Reader – from Hermes Trismegistus to Isaac Newton* (Cambridge University Press, 2003).

Livingston, James, 'Pragmatism, Nihilism, and Democracy: What is Called Thinking at the End of Modernity?' in John J. Stuhr (ed.), *100 Years of Pragmatism: William James's Revolutionary Philosophy* (Bloomington: Indiana University Press, 2010) pp. 144 - 172.

Lobis, Seth, *The Virtue of Sympathy: Magic, Philosophy and Literature in Seventeenth Century England* (New Haven, CT: Yale University Press, 2015).

Lomas, Robert, *Turning the Solomon Key: Decoding the Masonic symbols and history of Washington DC* (London: Corgi/Transworld, 2009 [2006]).

Long, A. A., *From Epicurus to Epictetus: Studies in Hellenistic and Roman Philosophy* (Clarendon/Oxford University Press, 2006).

Lorenz, Edward N., *The Essence of Chaos* (University of Washington Press, 1993)

Longley, Michael, Eileen Battersby (interviewer), 'An Outsider Searching for His Home: Eileen Battersby talks to Michael Longley', *The Irish Times*, 11th January 1992, p. 5.

Lopez, Donald S. Jr., *Approaching the numinous: Rudolf Otto and Tibetan tantra, Philosophy East and West* Vol. 29 No. 4 (Oct. 1979) pp. 467 – 476.

Louis, Anthony, *Horary Astrology: The History and Practice of Astro-Divination* (St. Paul, MN: Llewellyn, 1991)

Lovejoy, Arthur O., 'The Thirteen Pragmatisms (I & II)', *The Journal of Philosophy, Psychology and Scientific Methods*, Vol.5, No.1 (2nd January 1908), pp. 5-12, and Vol.5 No.2 (16th January 1908), pp.29-39.

Lowe, E. J., 'Truth' in Ted Honderich (ed.), *The Oxford Companion to Philosophy* (Oxford University Press, 1995) pp. 881 – 2.

Luck, Georg, *Arcana Mundi: Magic and the Occult in the Greek and Roman Worlds* (Baltimore, MD: The Johns Hopkins University Press, 1985).

Luhrmann, T. M., *Persuasions of the Witch's Craft: Ritual Magic in Contemporary England* (Cambridge, MA: Harvard University Press, 1989).

Lynch, Michael P., 'Deflationary Views and their Critics: Introduction' in Michael P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives* (Cambridge, Mass: MIT Press, 2001) pp. 422 – 428.

Lynch, Michael P., 'Primitivism, Identity Theory, and Alethic Pluralism: Introduction' in Michael P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives* (Cambridge, Mass: MIT Press, 2001) pp. 615 – 621.

Lynch, Michael P., 'Realism and the Correspondence Theory: Introduction' in: Michael P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives* (Cambridge, Mass: MIT Press, 2001) pp. 9 – 15.

Lynch, Michael P., *True to Life: Why Truth Matters* (Cambridge, MA: MIT Press, 2005)

Main, Roderick, *Revelations of Chance: Synchronicity as Spiritual Experience* (Albany, NY: State University of New York, 2007).

Main, Roderick, *The Rupture of Time: Synchronicity and Jung's Critique of Modern Western Culture* (Hove: Brunner-Routledge, 2004).

Mandelbrot, Benoit, 'How Long is the Coast of Britain? Statistical Self-similarity and Fractional Dimension', *Science* 156 (1967) pp. 636 – 638.

Manetti, Giovanni, Christine Richardson (tr.), *Theories of the Sign in Classical Antiquity* (Bloomington, IN: Indiana University Press, 1993 [1987 as *Le teorie del segno nell'antichità classica*]).

Manilius, Marcus, G. P. Goold (ed. and tr.), *Astronomica* (Cambridge, Mass.: Harvard University Press, 1997 [1977]).

Mansfield, Victor, 'An Astrophysicist's Sympathetic and Critical View of Astrology', *The Mountain Astrologer* No. 74 (Aug – Sept 1997), pp. 46 - 54. Also at: <https://www.vicmansfield.com/philosophy-and-cosmology/an-astrophysicists-sympathetic-and-critical-view-of-astrology/> (accessed 24th August 2019).

Mansfield, Victor, *Head and Heart: A Personal Exploration of Science and the Sacred* (Wheaton, IL: Quest Books, 2002).

Marcus, George E., 'Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography' in *Annual Review of Anthropology*, Vol.24, 1995, p.95-117.

Marks, Tracy, *The Art of Chart Interpretation: A Step-by-Step Method of Analyzing, Synthesizing and Understanding the Birth Chart* (3rd edn.) (Lake Worth, FL: Ibis Press, 2009 [1979 as *The Art of Chart Synthesis*]).

Marshall, L., '!Kung Bushmen religious beliefs', *Africa* 32 (3) (1962), pp. 221 – 52.

Mather, Arthur, 'Modern Science, Epistemology and Astrology: Following up on Garry Phillipson's challenging article', *Correlation* 26 (1) 2008, pp. 53 - 59.

Mather, Arthur, Response to a review of Dean et al, *Recent Advances*, by Malcolm Dean in 'Astrology: a Review Symposium', *The Zetetic Scholar* Nos. 3 & 4 (1979), pp. 104 – 6.

Matlin, Margaret W., 'Pollyanna Principle' Rüdiger F. Pohl, *Cognitive Illusions: Intriguing Phenomena in Thinking, Judgment and Memory*, 2nd edn. (Abingdon: Routledge, 2017) pp. 315 – 336.

Matlin, Margaret W., David J. Stang, *The Pollyanna Principle: Selectivity in Language, Memory and Thought* (Cambridge, MA: Schenkman Publishing, 1978).

Matthew (Apostle), J.R.C. Cousland (tr.), *The Gospel According to Matthew* in: Michael D. Coogan (ed.), *The New Oxford Annotated Bible; New Revised Standard Version with the Apocrypha* (4th edn.), (Oxford: Oxford University Press, 2010 [1962]), pp. 1746 - 1790

Maxwell-Stuart, P. G., *Astrology: From Ancient Babylon to the Present* (Stroud: Amberley, 2010).

May, Rollo, *The Cry for Myth* (New York, NY: Delta, 1991)

- McCartney, Terri, 'Advancing the AstroSignature for Alcohol Abuse': <http://www.astroresources.com/alcohol.html> (published 2004, accessed 23rd August 2019).
- McCutcheon, Russell T. (ed.), *The Insider/Outsider Problem in the Study of Religion – A Reader* (London: Cassell, 1999).
- McDermott, John J., 'Introduction' in: William James; Frederick Burkhardt, Fredson Bowers (eds.), *Essays in Radical Empiricism, The Works of William James*, (Cambridge, MA: Harvard University Press, 1976 [1912]), pp. xi - xlvi
- McEvelley, Thomas, *The Shape of Ancient Thought: Comparative Studies in Greek and Indian Philosophies* (New York, NY: Allworth Press, 2002).
- McGinn, Bernard, *The Foundations of Mysticism: Origins to the Fifth Century* (New York: Crossroad, 1991)
- McNess, Elizabeth, Lore Arthur and Michael Crossley, "Ethnographic Dazzle" and the construction of the "Other": revisiting dimensions of insider and outsider research for international and comparative education' in *Compare: A Journal of Comparative and International Education* Vol. 45 No. 2 pp. 295 – 316.
- McRitchie, Kenneth D., *Environmental Cosmology – Principles and Theory of Natal Astrology* (Toronto: Cognizance Books, 2004).
- McTaggart, J. M. E., *The Nature of Existence* (Vol. 1) (Cambridge: Cambridge University Press, 1921)
- Medina, José M., 'James on Truth and Solidarity' in John J. Stuhr (ed.), *100 Years of Pragmatism: William James's Revolutionary Philosophy* (Bloomington, IN: Indiana University Press, 2010) pp. 124 – 143.
- Mehdi Ha'iri Yazdi, *The Principles of Epistemology in Islamic Philosophy: Knowledge by Presence* (New York: SUNY, 1992)
- Meier, C. A., 'Psychosomatic Medicine from the Jungian Point of View', *Analytical Psychology* Vol. 8 No. 2 (July 1963) pp. 103 - 120.
- Menand, Louis, *The Metaphysical Club* (London: HarperCollins, 2001).
- Mermin, N. David, 'Abandoning Preconceptions: Reply to Bloor and Barnes', *Social Studies of Science* (Vol.28, No.4, Aug 1998), pp. 641 – 647.
- Mermin, N. David, *Boojums all the Way Through: Communicating Science in a Prosaic Age* (Cambridge University Press, 1990)
- Mermin, N. David, 'The Science of Science: A Physicist Reads Barnes, Bloor and Henry', *Social Studies of Science* (Vol. 28, No.4, Aug 1998), pp. 603 – 623.

Meyer, Max, 'The Exact Number of Pragmatisms', *The Journal of Philosophy, Psychology and Scientific Methods* Vol.5, No.12 (4th June 1908), pp.321-326.

Midgley, Mary, *Science and Poetry* (London: Routledge, 2001)

Mill, John Stuart, *A System of Logic, Ratiocinative and Inductive: Being a Connected View of the Principles of Evidence and the Methods of Scientific Investigation* (8th edn.) (New York: Harper & Brothers, 1882 [1843])

Mill, John Stuart, *Utilitarianism* in: Mary Warnock (ed.), *John Stuart Mill: Utilitarianism; On Liberty; Essay on Bentham, together with selected writings of Jeremy Bentham and John Austin* (London: Collins/Fontana, 1962 [1861]).

Millar, Alan, 'How Reasons for Action Differ from Reasons for Belief' in Simon Robertson (ed.), *Spheres of Reason: New Essays in the Philosophy of Normativity* (Oxford University Press 2009) pp. 140 - 163.

Miller, Franklin G., 'William James, Faith, and the Placebo Effect', *Perspectives in Biology and Medicine* Vol. 48 No.2 (Spring 2005), pp. 273 – 281.

Moerman, Daniel E., Wayne B. Jonas, 'Deconstructing the Placebo Effect and Finding the Meaning Response', *Annals of Internal Medicine* Vol. 136, No.6 (19 March 2002), pp. 471 – 476..

Moore, David W., 'Three in Four Americans Believe in Paranormal': <http://news.gallup.com/poll/16915/Three-Four-Americans-Believe-Paranormal.aspx> (checked 24th August 2019)

Moore, Marcia, *Astrology Today: A Socio-Psychological Survey (Research Bulletin No. 2, Astrological Research Associates)* (New York: Lucis Publishing, 1960)

Moore, Megan Bishop, *Philosophy and Practice in Writing a History of Ancient Israel* (New York, NY: T & T Clark, 2006).

Moore, Thomas, *The Planets Within: The Astrological Psychology of Marsilio Ficino (revised edn.)* (New York, NY: Lindisfarne, 1989 [1982]).

Moore, Thomas, *The Re-Enchantment of Everyday Life* (New York, NY: Harper Collins, 1996).

Moser, Fanny, *Spük: Wahrglaube oder Irrglaube?* Freiburg: Baden bei Zürich, Gyr-Verlag, 1950).

Moser, Paul, 'Lehrer's Coherentism and the Isolation Objection' in John W. Bender (ed.), *The Current State of the Coherence Theory: Critical Essays on the Epistemic Theories of Keith Lehrer and Laurence Bonjour, with replies* (Dordrecht: Kluwer, 1989), pp. 29 – 37.

Moshan Fání; David Shea, Anthony Troyer (trs.), *The Dabistán or School of Manners (aka Dabestān-e Mazāheb)* (New York: M. Walter Dunne, 1901).

- Mosteller, Timothy M., *Theories of Truth: An Introduction* (London: Bloomsbury Academic, 2014)
- Mounce, Howard, *The Two Pragmatisms: From Peirce to Rorty* (London: Routledge, 1997)
- Mueller, Gustav Emil, 'On William James' "Radical Empiricism"' in: Walter Robert Corti (ed.), *The Philosophy of William James* (Hamburg: Felix Meiner, 1976), pp. 147 – 156.
- Munk, Kirstine, *Signs of the Times. Cosmology and ritual practice in modern, Western astrology* (unpublished doctoral thesis, University of Southern Denmark, 2007)
- Myers, D. G., *Intuition: Its Powers and Perils* (New Haven, CT: Yale University Press, 2002).
- Nagel, Thomas, *The View from Nowhere* (Oxford: Oxford University Press, 1986).
- Nasr, Seyyed Hossein, *An Introduction to Islamic Cosmological Doctrines* (State University of New York: 1993).
- Nasser, Rafael, Jodie Forrest (ed.), *Under One Sky* (Chapel Hill, NC: Seven Paws Press, 2004).
- National Council for Geocosmic Research (NCGR), 'Our Code of Ethics' (Adopted 10th October 1998), Section A.2, D.1. <https://geocosmic.org/about-ncgr/code-of-ethics/> (accessed 21st December 2018).
- Needham, Joseph, *Science and Civilisation in China (Volume 5)*, (Cambridge University Press, 1980).
- Neher, Andrew, *The Psychology of Transcendence* (Englewood Cliffs, NJ: Prentice-Hall, 1980)
- Neugebauer, Otto, *The Exact Sciences in Antiquity* (Princeton University Press, 1952).
- Nias, David K. B., and Geoffrey A. Dean, 'Astrology and Parapsychology' in Sohan Modgil and Celia Modgil (eds.) *Hans Eysenck: Consensus and Controversy* (Philadelphia, PA: Falmer, 1986) pp. 361 – 375.
- Nickles, Thomas, 'The Problem of Demarcation' in: Massimo Pigliucci, Maarten Boudry (eds.), *Philosophy of Pseudoscience* (Chicago, IL: University of Chicago Press, 2013) pp. 101 – 120.
- Niehenke, Peter, 'The Whole is More than the Sum of its Parts', *Astro-Psychological Problems* Vol. 1 No. 2, pp. 33 – 37.

- Notomi, Noburu, *The Unity of Plato's Sophist: Between the Sophist and the Philosopher* (Cambridge University Press, 1999)
- O'Brien, Dan, *An Introduction to the Theory of Knowledge* (Cambridge: Polity, 2006).
- O'Connor, June, 'The Epistemological Significance of Feminist Research in Religion' in Ursula King (ed.), *Religion and Gender* (Oxford: Blackwell, 1995) pp. 45 - 64.
- O'Grady, Paul, *Relativism* (Chesham: Acumen, 2002)
- Olupona, Jacob K., 'Owner of the Day' in Michael Winkelman and Philip M. Peek, *Divination and Healing: Potent Vision* (Tucson, AZ: University of Arizona Press, 2004) pp. 103 – 117.
- Omarr, Sydney, *My World of Astrology* (Hollywood, CA, Wilshire: 1975)
- Otto, Rudolf, John W. Harvey (tr.), *The Idea of the Holy: An Inquiry into the non-rational factor in the idea of the divine and its relation to the rational* (Oxford: Oxford University Press, 1923)
- Overton, Judge William R., 'United States District Court Opinion – McLean v. Arkansas' in: Michael Ruse (ed.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (Amherst: New York, 1996), pp. 307 – 331; also at: <http://law.justia.com/cases/federal/district-courts/FSupp/529/1255/2354824/> (accessed 24th August 2019).
- Owen, H. P., *Concepts of Deity* (London: MacMillan, 1971)
- Parker, Adrian, and Göran Brusewitz 'A Compendium of the Evidence for Psi', *European Journal of Parapsychology* (18: 2003), pp. 33 – 51.
- Passmore, John, *A Hundred Years of Philosophy* (2nd edn.) (London: Gerald Duckworth, 1968 [1956]).
- Patilas, Gerasime, 'Editorial', *Astrological Journal*, Vol.50 No.5, Sept/Oct 2008, p. 4.
- Pawelski, James O., *The Dynamic Individualism of William James* (Albany, NY: State University of New York)
- Peacock, Kent A., *The Quantum Revolution: A Historical Perspective* (Westport, CT: Greenwood, 2008)
- Pedersen, Nikolaj Jang, 'Stabilizing Alethic Pluralism', *The Philosophical Quarterly* Vol. 60 No. 238 (January 2010), pp. 92 – 108.
- Pedersen, Nikolaj J. L. L. and Cory D. Wright, 'Introduction' in Nikolaj J. L. L. Pedersen and Cory D. Wright (eds.), *Truth and Pluralism: Current Debates* (Oxford University Press, 2013) pp. 1 – 18.

Pedersen, Nikolaj J. L. L., Michael P. Lynch, 'Truth Pluralism' in Michael Glanzberg (ed.), *The Oxford Handbook of Truth* (Oxford University Press, 2018) pp. 543 – 578.

Peek, Philip M. (ed.), *African Divination Systems: Ways of Knowing* (Bloomington, IN: 1991).

Peirce, Charles S.; Charles Hartshorne, Paul Weiss, Arthur W. Burks (eds.), *The Collected Papers of Charles Sanders Peirce (Electronic Edition)* (Charlottesville, VA: InteLex Corporation, 1994). This electronic volume contains the following texts:

Peirce, Charles S.; Charles Hartshorne, Paul Weiss (eds., vols. 1 – 6); Arthur W. Burks (ed., vols. 7 – 8), *The Collected Papers of Charles Sanders Peirce* (Cambridge, Mass: Harvard University Press, 1932 for vols. 1 – 3, 1935 for vols. 4 – 6, 1958 for vols. 7 – 8).

The electronic volume uses a referencing scheme in the format 'CP 4.17' whereby 'CP' signifies 'Collected Papers', '4' (for instance) means volume 4 and '17' means paragraph 17 in that volume.

Peirce, Charles Sanders, 'The Fixation of Belief', *Popular Science Monthly* 12 (November 1877), pp. 1 – 15, also in: *Collected Papers*, CP 5. 358 – 387.

Peirce, Charles Sanders, 'How to Make Our Ideas Clear', *Popular Science Monthly* 12 (January 1878), pp. 286-302, also in: *Collected Papers*, CP 5. 388 – 410.

Peirce, Charles Sanders, 'The First Rule of Logic' – a lecture delivered by Peirce on 21st February 1898. CP 5. 574 – 589.

Peirce, Charles S., 'Logical [Truth]', section of article 'Truth and Falsity' in: James Mark Baldwin (ed.), *Dictionary of Philosophy and Psychology, revised edn.* (Vol. II) (New York: MacMillan, 1920 [1901]) pp. 718 - 720; also in: Peirce, *Collected Papers*, CP 5.565 – 573.

Peirce, Charles S., 'A Neglected Argument for the Reality of God' in *Collected Papers*, CP 6. 452 – 493. Originally in *Hibbert Journal*, Vol. 7 (1908), pp. 90-112).

Perry, Ralph Barton, *The Thought and Character of William James* Vol. 1 (Boston, Mass: Little, Brown, and Company, 1935)

Phillipson, Garry, 'Astrology as Heresy in Contemporary Belief' *Journal for the Study of Religion, Nature and Culture* 13.1 (2019), pp. 12 – 30.

Phillipson, Garry, *Astrology in the Year Zero* (London: Flare, 2000).

Phillipson, Garry, and Dennis Elwell, 'Self-Defence for Astrologers' *The Astrological Journal*, Vol.43 No.5, Sept/Oct 2001, pp.13 - 22.

Phillipson, Garry, 'Modern Science, Epistemology and Astrology', *Correlation* Vol. 23 No. 2 (2006), pp. 4 – 23.

Pigliucci, Massimo, Maarten Boudry, 'Introduction: Why the Demarcation Problem Matters' in: Massimo Pigliucci and Maarten Boudry (eds.), *Philosophy of Pseudoscience: Reconsidering the Demarcation Problem* (University of Chicago Press, 2013), pp. 1 – 6.

Pingree, David E., and Robert Andrew Gilbert, 'Astrology', *Encyclopaedia Britannica*, <https://www.britannica.com/topic/astrology> (accessed 12th August 2019).

Pingree, David E., *From Astral Omens to Astrology, from Babylon to Bīkāner* (Rome: Istituto Italiano per L'Africa e l'oriente, 1997).

Pinto, Robert C., *Argument, Inference and Dialectic: Collected Papers on Informal Logic* (Dordrecht: Kluwer, 2001).

Pitcher, George (ed.), *Truth* (Englewood Cliffs, NJ: Prentice-Hall, 1964).

Plato, Donald J. Zeyl (tr.), *Gorgias* in: Plato, John M. Cooper (ed.), *Plato: Complete Works* (Indianapolis, IN, Hackett, 1987) pp. 791 – 869.

Plato; Alexander Nehamas and Paul Woodruff (trs.), *Phaedrus* in: Plato, John M. Cooper (ed.), *Plato: Complete Works* (Indianapolis, IN, Hackett, 1987) pp. 506 – 556.

Plato; G. M. A. Grube, rev. C. D. C. Reeve (trs.), *Republic* in: Plato, John M. Cooper (ed.), *Plato: Complete Works* (Indianapolis, IN, Hackett, 1987) pp. 971 – 1223.

Plato, Nicholas P. White (tr.), *Sophist* in: Plato, John M. Cooper (ed.), *Plato: Complete Works* (Indianapolis, IN, Hackett, 1987) pp. 235 – 293.

Plato; M. J. Levett, rev. Myles Burnyeat (trs.), *Theaetetus* in: Plato, John M. Cooper (ed.), *Plato: Complete Works* (Indianapolis, IN Hackett, 1987), pp. 157 – 234.

Pliny (the Elder); John Bostock, H. T. Riley (trs.), *The Natural History of Pliny Vol. II* (London: Henry G. Bohn, 1855).

Plotinus, Stephen MacKenna (tr.), *The Enneads: A new, definitive edition* (New York: Larson/Paul Brunton Philosophic Foundation, 1992).

Poincaré, Henri, 'Sur le Problème des Trois Corps et les Équations de la Dynamique', *Acta Mathematica* 13 (1890), pp. 1 – 270.

Pojman, Louis P., 'Theories of Justification (I): Foundationalism and Coherentism' in Louis P. Pojman (ed.), *The Theory of Knowledge: Classic and Contemporary Readings* (2nd edn.) (Belmont, CA: Wadsworth, 1993) p. 190.

Polanyi, Michael, *The Tacit Dimension* (New York: Doubleday, 1966).

Polkinghorne, John, *Science and the Trinity: The Christian Encounter with Reality* (New Haven, CT: Yale University Press, 2004)

- Pollock, John L., *Knowledge and Justification* (Princeton, NJ: Princeton University Press, 1974)
- Pond, David, *Mapping Your Romantic Relationships: Discover Your Love Potential (Astrology Made Easy)* (St. Paul, MN: Llewellyn, 2004)
- Popper, Karl, Patrick Camiller (tr.), *All Life is Problem Solving* (London: Routledge, 1999 [1994 as *Alles Leben ist Problemlösen*])
- Popper, Karl, *Conjectures and Refutations: The Growth of Scientific Knowledge (3rd edn.)* (London: Routledge & Kegan Paul, 1969 [1963])
- Popper, Karl, *The Logic of Scientific Discovery* (London: Routledge, 2002 [1959 for first English edition; 1935 for first publication as *Logik der Forschung*]).
- Press, Gerald A., 'Plato' in Richard H. Popkin, *The Columbia History of Western Philosophy* (New York: Columbia University Press, 1999) pp. 32 – 52.
- Press, Nona, *New Insights into Astrology* (San Diego: ACS Publications, 1993).
- Press, N., N. F. Michelsen, L. Russel, J. Shannon, M. Stark, 'The New York Suicide Study', *Journal of Geocosmic Research* Vol.2 No.2 (1978), pp.23-47. Reproduced in Nona Press, *New Insights into Astrology* (San Diego: ACS Publications, 1993), pp.311-329. References to the study in this thesis are to the 1993 text.
- Proops, Ian, 'Russellian Acquaintance Revisited', *Journal of the History of Philosophy* Vol. 52 No. 4 (2014), pp. 779 – 811.
- Pruzan, Peter, *Research Methodology: The Aims, Practices and Ethics of Science* (Cham, Switzerland: Springer, 2016)
- Pseudo-Dionysius, Colm Lubheid (tr.), *Pseudo-Dionysius: the Complete Works* (Mahwah, NJ: Paulist Press, 1987)
- Ptolemy, F. E. Robbins (ed., tr.), *Tetrabiblos* (Cambridge, MA: Harvard University Press, 1940).
- Putnam, Hilary, 'Dewey Lectures, Lecture III: The Face of Cognition', *The Journal of Philosophy*, Vol. 91 No. 9, Sept 1994, pp. 488 – 517.
- Putnam, Ruth Anna, 'Introduction' in: Ruth Anna Putnam (ed.), *The Cambridge Companion to William James* (Cambridge: Cambridge University Press, 1997), pp. 1 – 10.
- Pylkkänen, Paavo T. I., *Mind, Matter and the Implicate Order* (Berlin: Springer, 2007)
- Quine, W. V., 'Naturalism: Or, Living Within One's Means', *Dialectica* 49 (1995) pp. 251 – 261.

- Quine, W. V., 'The Nature of Natural Knowledge' in Samuel Guttenplan (ed.), *Mind and Language: Wolfson College Lectures 1974* (Oxford: Clarendon/Oxford University Press, 1975) pp. 67 – 81.
- Quine, W. V., *Theories and Things* (Cambridge, Mass: Belknap/Harvard University Press, 1981).
- Radermacher, Lindsay, *The Role of Dialogue in Astrological Divination* (MPhil dissertation, University of Kent, 2011)
- Radin, Dean, *Real Magic: Ancient Wisdom, Modern Science, and a Guide to the Secret Power of the Universe* (New York, NY: Harmony, 2018)
- Ramana Maharshi, David Godman (ed.), *Be As You Are – The Teachings of Sri Ramana Maharshi* (Arkana, 1985)
- Ramsey, F. P., and G. E. Moore, 'Symposium: Facts and Propositions' *Proceedings of the Aristotelian Society, Supplementary Volumes, Vol. 7, Mind, Objectivity and Fact* (1927) pp. 153 – 206.
- Randerson, James, 'Dawkins' Christmas Card List', *The Guardian* 28th May 2007: <https://www.theguardian.com/commentisfree/2007/may/28/dawkinschristmascardlist> (accessed 8th August 2019).
- Rappaport, Michael, *Ritual and Religion in the Making of Humanity* (Cambridge: Cambridge University Press, 1999)
- Rescher, Nicholas, *Pragmatism: the Restoration of Its Scientific Roots* (New Brunswick, New Jersey: Transaction, 2012).
- Rescher, Nicholas, *Predicting the Future: An Introduction to the Theory of Forecasting* (State University of New York, 1998)
- Rescher, Nicholas, *Realistic Pragmatism: An Introduction to Pragmatic Philosophy* (State University of New York Press, 1979).
- Rescher, Nicholas, *Studies in Pragmatism (Collected Papers II)* (Heusenstamm, Germany: Ontos Verlag, 2005)
- Richards, Janet Radcliffe, *Human Nature after Darwin: A philosophical introduction* (London: Routledge, 2000)
- Richardson, Robert D., *William James: In the Maelstrom of American Modernism – A Biography* (Boston: Houghton Mifflin, 2006).
- Riley, Mark, 'Science and Tradition in the Tetrabiblos', *Proceedings of the American Philosophical Society*, Vol. 132, No. 1 (1988) pp. 67 - 84.
- Risjord, Mark, *Philosophy of Social Science: a Contemporary Introduction* (New York: Routledge, 2014).

- Roberts, Peter, Helen Greengrass, *The Astrology of Time Twins* (Bishop Auckland, Durham: Pentland Press, 1994)
- Rojszczak, Artur, Jan Woleński (ed.) *From the Act of Judging to the Sentence: The Problem of Truth Bearers from Bolzano to Tarski* (Dordrecht: Springer, 2005).
- Rorty, Richard, *Consequences of Pragmatism* (Minneapolis, MN: University of Minnesota Press, 1982)
- Rorty, Richard, 'Pragmatism as Anti-Representationalism (Introduction)' in John P. Murphy, *Pragmatism from Peirce to Davidson* (Boulder, Colo: Westview, 1990) pp. 1 – 6.
- Rorty, Richard, 'Pragmatism as Romantic Polytheism' in Morris Dickstein (ed.), *The Revival of Pragmatism: New Essays on Social Thought, Law and Culture* (Durham, NC: Duke University Press, 1998) pp. 21 – 36.
- Rorty, Richard, 'Response to Richard Bernstein' in Herman J. Saatkamp Jr. (ed.), *Rorty & Pragmatism – The Philosopher Responds to His Critics* (Nashville: Vanderbilt University Press, 1995), pp. 68 – 71.
- Rosenblum, Bruce, and Fred Kuttner, *Quantum Enigma: The Spooky Interaction of Mind and Matter* (London: Gerald Duckworth, 2007)
- Rosenthal, Sandra B., Patrick L. Bourgeois, *Pragmatism and Phenomenology: A Philosophic Encounter* (Amsterdam: B. R. Gruner, 1980).
- Rossem, C. P. van, *Twee Occulte Problemen* (The Hague: W. P. van Stockum & Zoon, 1933).
- Rudhyar, Dane, *An Astrological Mandala: The Cycle of Transformation and its 360 Symbolic Phases* (New York, NY: Vintage Books, 1974 [1973]).
- Rudhyar, Dane, *The Astrology of Personality: A Re-formulation of Astrological Concepts and Ideals, in Terms of Contemporary Psychology and Philosophy* (3rd edn.) (Garden City, NY: Doubleday, 1970 [1936]).
- Rudhyar, Dane, 'The Birth Chart as a Celestial Message from the Universal Whole to an Individual Part' (talk given to the 1976 Convention of the American Federation of Astrologers) <http://www.khaldea.com/rudhyar/astroarticles/celestialmessage.shtml> (accessed 25th June 2016).
- Rudhyar, Dane, *From Humanistic to Transpersonal Astrology* (Palo Alto, CA: The Seed Center, 1975 [1972 as *My Stand on Astrology*, expanded for 1975 republication]).
- Rudhyar, Dane, 'How Can Astrology's Claims be Proven Valid', *The Aquarian Agent* (issue 1.10, 1970) pp. 5 – 8. Originally published in *Insearch* (Spring 1961); www.cosmocritic.com/pdfs/Rudhyar_Dane_How_Can_Astrologys_Claims.pdf (accessed 17th August 2019).

Rudhyar, Dane, *Person-Centered Astrology* (New York, NY: ASI Publishers, 1980 [1972]).

Rudhyar, Dane, *The Practice of Astrology – As a Technique in Human Understanding* (Boulder, CO: Shambhala, 1978 [1968])

Rudhyar, Dane, *The Pulse of Life* (Berkeley, CA: Shambhala, 1970 [1943]).

Rudhyar, Dane, review of Dean et al, *Recent Advances*, in ‘Astrology: A Review Symposium’, *Zetetic Scholar* Nos. 3 & 4, April 1979, pp. 83 – 5.

Rupert, Alexander, ‘Meaning of Humanistic Astrology’ (Lecture at 1st European Astrological Congress, Prague 1994)
www.cosmocritic.com/pdfs/Rupert_Alexander_Meaning_of_Humanistic_Astrology.pdf (accessed 27th August 2019)

Ruse, Michael, (ed.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (Amherst, NY: Prometheus, 1996)

Ruse, Michael, ‘Introduction to Part Four: The Philosophical Aftermath’ in: Michael Ruse, (ed.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (Amherst, NY: Prometheus, 1996) pp. 335 – 6.

Ruse, Michael, ‘Prologue: A Philosopher’s Day in Court’ in: Michael Ruse, (ed.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (Amherst, NY: Prometheus, 1996) pp. 13 – 35.

Ruse, Michael, ‘Witness Testimony Sheet: McLean v. Arkansas’ in: Michael Ruse, (ed.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (Amherst, NY: Prometheus, 1996) pp. 287 – 306.

Russell, Bertrand, *History of Western Philosophy and its Connection with Political and Social Circumstances from the Earliest Times to the Present Day* (London: George Allen and Unwin, 1946)

Russell, Bertrand, ‘Knowledge by Acquaintance and Knowledge by Description’, *Proceedings of the Aristotelian Society*, Vol. 11 (1910 – 11) pp. 108 – 128.

Russell, Bertrand, John G. Slater (ed.) *Last Philosophical Testament* (London: Routledge, 1997).

Russell, Bertrand, ‘Logical Atomism’ in J. H. Muirhead (ed.), *Contemporary British Philosophy: Personal Statements (First Series)* (London: George Allen & Unwin, 1924) pp. 357 – 383.

Russell, Bertrand, *My Philosophical Development* (New York: Simon & Schuster, 1959)

Russell, Bertrand, 'On Astrologers' in: Bertrand Russell, *Mortals and Others, Volume I: American Essays 1931 – 1935* (Oxford: Routledge, 1975) pp.124 – 5. (Article first published in the Hearst group of newspapers, 28th September 1932).

Russell, Bertrand, 'On Denoting', *Mind* Vol. 114, No. 456 (Oct 1905) pp. 873 – 887.

Russell, Bertrand, 'The Philosophy of Logical Atomism', *The Monist* Vol. 28 No. 4 (October 1918), pp. 495 – 527.

Russell, Bertrand, *Portraits from Memory and Other Essays* (London: George Allen & Unwin, 1956).

Russell, Bertrand, *The Problems of Philosophy* (Oxford University Press, 1959 [1912]).

Rutkin, H. Darrel, 'The Use and Abuse of Ptolemy's *Tetrabiblos* in Renaissance and Early Modern Europe: Two Case Studies (Giovanni Pico della Mirandola and Filippo Fantoni) in: Alexander Jones (ed.), *Ptolemy in Perspective: Use and Criticism of his Work from Antiquity to the Nineteenth Century* (Dordrecht: Springer, 2010) p. 135 – 150.

Ryle, Gilbert, *The Concept of Mind* (London: Hutchinson, 1949).

Ryle, Gilbert, 'Knowing How and Knowing That', *Proceedings of the Aristotelian Society* Vol. 46 (1945 – 6), pp. 1 – 16.

Sagan, Carl, *The Cosmic Connection: An Extraterrestrial Perspective* (New York: Doubleday, 1973).

Sagan, Carl, 'Objections to Astrology' (letter to the editor), *The Humanist*, Vol. 36 No. 1 (Jan/Feb 1976) p. 2 (reprinted in: Carl Sagan, *The Demon-Haunted World: Science as a Candle in the Dark* (New York: Ballantine/Random, 1995) pp. 302 – 3).

Sakoian, Frances, and Louis S. Acker, *The Astrologer's Handbook* (London: Penguin, 1981 [1974])

Howard Sasportas, 'The Quest for the Sublime' in Greene & Sasportas, *Dynamics of the Unconscious* (London: Arkana/Penguin, 1989) pp.167 – 253.

Schantz, Richard, 'Introduction' in Richard Schantz (ed.), *What is Truth?* (Berlin: de Gruyter, 2002), pp. 1 – 8.

Schiller, F.C.S., 'William James and the Making of Pragmatism', in: F.C.S. Schiller, *Must Philosophers Disagree? And Other Essays in Popular Philosophy* (London: Macmillan and Co, 1934), pp. 93 – 105. (Article originally published in *The Personalist*, 8 (1927), pp.81 – 93.)

Schrödinger, Erwin, 'Discussion of Probability Relations Between Separated Systems' in *Proceedings of the Cambridge Philosophical Society* No. 31, 1935, pp.555 – 562.

Scruton, Roger, *Modern Philosophy* (London: Pimlico, 2004)

- Segerstråle, Ullica, 'Science and Science Studies: Enemies or Allies' in Ullica Segerstråle (ed.), *Beyond the Science Wars: The Missing Discourse about Science and Society* (Albany, NY: SUNY Press, 2000), pp. 1 – 40.
- Seidman, Irving, *Interviewing as Qualitative Research : A Guide for Researchers in Education and the Social Sciences* (4th edn.) (New York NY: Teachers College Press, 2013).
- Seigfried, Charlene Haddock, *William James's Radical Reconstruction of Philosophy* (State University of New York, 1990).
- Sextus Empiricus, Richard Bett (tr., ed.), *Against the Logicians* (Cambridge University Press, 2005).
- Sextus Empiricus, R. G. Bury (tr.), *Against the Professors* (Cambridge, MA: Harvard University Press, 1949),
- Sextus Empiricus, Benson Mates (tr.), *The Skeptic Way: Sextus Empiricus's Outlines of Pyrrhonism* (New York: Oxford University Press, 1996).
- Seymour, Percy, Bronwyn Elko (interviewer), 'The Magus of Magnetism: An Interview with Dr. Percy Seymour', <http://cura.free.fr/decem/09seym.html> (checked 24th August 2019). (Originally published in: *The Mountain Astrologer*, Vol. 80, Aug/Sept 1998).
- Seymour, Percy, *The Scientific Basis of Astrology: Tuning to the Music of the Spheres* (London: Quantum/Foulsham, 1997).
- Sharma, Arvind, *Classical Hindu Thought: an Introduction* (Oxford University Press, 2000)
- Sharma, Arvind, 'Predetermination and Free Will in the Teaching of Ramaṇa Maharṣi (1879-1950)' in *Religious Studies*, Vol. 20, No.4 (Dec 1984), p.615 – 626.
- Shermer, Michael, *Why People Believe Weird Things* (2nd edn.) (New York: Henry Holt & Company, 2002)
- Shumaker, Wayne, *The Occult Sciences in the Renaissance* (Berkeley: University of California Press, 1972).
- Simkin, Colin, *Popper's Views on Natural and Social Science* (Leiden: E. J. Brill, 1993)
- Sinclair, Marta, 'An integrated framework of intuition' in Marta Sinclair (ed.), *Handbook of Intuition Research* (Cheltenham: Edward Elgar, 2011), pp. 3 – 16.
- Slater, Michael R., *William James on Ethics and Faith* (Cambridge University Press, 2009).
- Smit, Rudolf, 'Astrology my passion: My life, my personal disaster' (2011), <http://www.astrology-and-science.com/a-pass2.htm> (accessed 16th June 2015).

Smit, Rudolf H., 'Leo Knecht – A White Crow Beyond Our Wildest Dreams?', *Correlation* Vol. 16, No. 1 (Northern Summer 1997), pp. 3 – 18.

Smit, Rudolf, 'Moment Supreme: Why Astrologers Keep Believing in Astrology' (2011) - www.astrology-and-science.com/a-mome2.htm (accessed 30th August 2019). This is a translated and updated version of an article published in the Dutch journal *Skepter* in March 1983.

Smit, Rudolf H., 'Results of the Knecht Follow-up Test', *Correlation* Vol. 17 No. 2 (Northern Winter 1998/9) pp. 72 – 77.

Smith, Barbara Herrnstein, *Belief and Resistance: Dynamics of Contemporary Intellectual Controversy* (Cambridge, Mass.: Harvard University Press, 1997).

Smith, Barbara Herrnstein, *Contingencies of Value: Alternative Perspectives for Critical Theory* (Cambridge, Mass: Harvard University Press, 1988).

Smith, Nicholas J. J., 'Book Reviews: Truth as One and Many by Michael P. Lynch', *Analysis* Vol. 70 No. 1 (January 2010) p. 191.

Smith, Paul H., Garret Moddel, 'Applied Psi' in Etzel Cardeña, John Palmer and David Marcusson-Clavertz, *Parapsychology: A Handbook for the 21st Century* (Jefferson NC: McFarland, 2015) pp. 380 - 388.

Smith, Richard Furnald, *Prelude to Science: An Exploration of Magic and Divination* (New York, NY: Charles Scribner's Sons, 1975)

Smolin, Lee, *The Life of the Cosmos* (London: Orion, 1997)

Sneller, Rico, 'Science of the Future: Hans Driesch and Parapsychology' in: Hein van Dongen, Hans Gerding and Rico Sneller (eds.), *Wild Beasts of the Philosophical Desert: Philosophers on Telepathy and Other Exceptional Experiences* (Newcastle upon Tyne: Cambridge Scholars Publishing, 2014) pp. 110 – 20.

Society for Judgment and Decision Making (website of): www.sjdm.org (accessed 21st August 2019).

Sokal, Alan, *Beyond the Hoax: Science, Philosophy and Culture* (Oxford: Oxford University Press, 2008).

Sokal, Alan, and Jean Bricmont, 'Defense of a modest scientific realism' in Martin Carrier, Johannes Roggenhofer, Günter Küppers, Philippe Blanchard (eds.) *Knowledge and the World: Challenges Beyond the Science Wars* (Berlin: Springer, 2004), pp. 17 – 53.

Sokal, Alan, 'Pseudoscience and postmodernism: Antagonists or fellow-travelers?' in Garrett G. Fagan (ed.), *Archaeological Fantasies: How Pseudoarchaeology Misrepresents the Past and Misleads the Public* (Routledge: London, 2006), pp. 286 – 361.

J. C. Spender, 'Making Knowledge the Basis of a Dynamic Theory of the Firm', *Strategic Management Journal*, Vol. 17 (Winter Special Issue) 1996 pp. 45 – 62.

Spinoza, Benedict De, R. H. M. Elwes (tr.), *The Ethics*, in: *The Chief Works of Benedict De Spinoza* (New York: Dover, 1955 [1677]), pp. 43 – 271.

Sprigge, T. L. S., *James and Bradley: American Truth and British Reality* (Chicago, IL.: Open Court, 1993).

Sprigge, T. L. S., 'Refined and Crass Supernaturalism' in Michael McGhee (ed.), *Philosophy, Religion and the Spiritual Life* (Cambridge University Press: 1992), pp.105 – 125.

Roger Squires, 'Placebo' in: Ted Honderich (ed.), *The Oxford Companion to Philosophy* (Oxford: Oxford University Press, 1995) p. 682.

Stannard, Russell, *The God Experiment* (London: Faber and Faber, 1999)

Stapp, Henry, 'Quantum Mechanical Theories of Consciousness' in Max Velmans, Susan Schneider (eds.), *The Blackwell Companion to Consciousness* (Malden, MA: Blackwell, 2007) p. 300.

Steele, Robert, Dorothea Waley Singer, 'The Emerald Table', *Proceedings of the Royal Society of Medicine* Vol.21 (1928), pp.41 – 56.

Stein, Rebecca L., and Philip Stein, *The Anthropology of Religion, Magic and Witchcraft* (3rd edn.) (Upper Saddle River, NJ: Prentice Hall/Pearson, 2011 [2005])

Stroeken, Koen, 'In Search of the Real: The Healing Contingency of Sukuma Divination' in: Michael Winkelman, Philip M. Peek (eds.), *Divination and Healing: Potent Vision* (Tucson, AZ: University of Arizona Press, 2004) pp. 29 – 54.

Sutcliffe, Thomas, 'It's in the Stars', *Independent*, 9th January 2002

Swinton, John, and Harriet Mowat, *Practical Theology and Qualitative Research* (2nd edn.) (London: SCM Press, 2016).

Synesius, Augustine Fitzgerald (tr.), *The Essays and Hymns of Synesius of Cyrene: Including the Address to the Emperor Arcadius and the Political Speeches* (Oxford: Oxford University Press, 1930)

Tanaka, Yutaka, 'The Individuality of a Quantum Event' in Timothy E. Eastman and Hank Keeton (eds.), *Physics and Whitehead: Quantum, Process, and Experience* (Albany: NY, State University of New York, 2003), pp. 164 – 179.

Tartaglia, James, *Rorty and the Mirror of Nature* (London: Routledge, 2007).

Taylor, Eugene, *William James on Consciousness Beyond the Margin* (Princeton, NJ: Princeton University Press, 1996).

Tester, Jim, *A History of Western Astrology* (Woodbridge: Boydell Press, 1987).

Thagard, Paul, *Coherence in Thought and Action* (Cambridge, Mass: Bradford/MIT, 2000)

Thagard, Paul, 'Coherence, Truth, and the Development of Scientific Knowledge', *Philosophy of Science* Vol. 74 No. 1 (Jan 2007) pp. 28 – 47 (reprinted in: Paul Thagard, *The Cognitive Science of Science: Explanation, Discovery, and Conceptual Change* (Cambridge, Mass.: MIT Press, 2012) pp. 81 – 100.)

Thagard, Paul R., 'Why Astrology is a Pseudoscience', *PSA: Proceedings of the Biennial Meeting of the Philosophy of Science Association, Vol. 1: Contributed Papers* (1978), pp. 223 - 234.

Thayer, H. S., *Meaning and Action: A Critical History of Pragmatism* (Indianapolis, IN: Hackett, 1981).

Thomas, Keith, *Religion and the Decline of Magic* (London: Penguin, 1991)

Thompson, R. Campbell, *The Reports of the Magicians and Astrologers of Nineveh and Babylon in the British Museum: Vol. II, English Translations, Vocabulary Etc* (London: Luzac and Co, 1900).

Thorndike, Lynn, *A History of Magic and Experimental Science, Volume VII: The Seventeenth Century* (New York, NY: Columbia University Press, 1958)

Thornton, Edward, *The Diary of a Mystic* (London: George Allen and Unwin, 1967).

Thouless, Robert H., 'The Present Position of Experimental Research into Telepathy and Related Phenomena', *Proceedings of the Society for Psychical Research* Vol. 47, Part 166, (1942) pp. 1 – 19.

Thouless, R. H. and B. P. Wiesner, 'The PSI Processes in Normal and "Paranormal" Psychology', *Proceedings of the Society for Psychical Research* 48 (Part 174), 1947, pp. 177 – 196.

Tien-Yien Li and James A. Yorke, 'Period Three Implies Chaos', *The American Mathematical Monthly* Vol. 82 No. 10 (Dec 1975) pp. 985 – 992.

Tolliver, Joseph Thomas, 'The St. Elizabethan World' in John W. Bender (ed.), *The Current State of the Coherence Theory: Critical Essays on the Epistemic Theories of Keith Lehrer and Laurence Bonjour, with Replies* (Dordrecht: Kluwer, 1989) pp. 160 – 7.

Tomlin, T. J., *A Divinity for all Persuasions: Almanacs and Early American Religious Life* (Oxford University Press, 2014).

Tracy, Thomas F., 'Divine Action' in: Philip L. Quinn, Charles Taliaferro (eds.), *A Companion to Philosophy of Religion* (Malden, MA: Blackwell, 1997), pp. 299 – 305.

Treitel, Corinna, *A Science for the Soul: Occultism and the Genesis of the German Modern* (Baltimore MD: Johns Hopkins University Press, 2004).

Tresan, David, 'A meditation on death: "Cast a cold eye"' in: Thomas Kirsch, Virginia Beane Rutter and Thomas Singer (eds.), *Initiation: The Living Reality of an Archetype* (Hove: Routledge, 2007), pp. 152 – 194.

Tyl, Noel, *Noel Tyl's Guide to Astrological Consultation* (Woodbury MN: Llewellyn, 2007)

Utts, Jessica, 'Appreciating Statistics (2016 ASA Presidential Address)', *Journal of the American Statistical Association*, Vol. 111 No. 516 (2016) pp. 1373 - 1380.

Velasquez, Manuel, *Philosophy: a Text with Readings* (11th edn.) (Boston MA: Wadsworth, 2011)

Voss, Angela, 'The Astrology of Marsilio Ficino: Divination or Science?', *Culture and Cosmos*: Vol. 4 No. 2 (Autumn/Winter 2000), pp. 29 - 45.

Vroom, Hendrik M., J.W. Rebel (tr.), *Religions and the Truth – Philosophical Reflections and Perspectives* (Grand Rapids: William B. Eerdmans Publishing, 1989)

Walker, Ralph C. S., *The Coherence Theory of Truth: Realism, anti-realism, idealism* (London: Routledge, 1989).

Wallace, Jeff, 'Introduction: difficulty and defamiliarisation – language and process in *The Origin of Species*' in: David Amigoni and Jeff Wallace (eds.), *Charles Darwin's The Origin of Species: New interdisciplinary essays* (Manchester University Press, 1995) pp. 1 – 46.

Wallerstein, Immanuel, 'World-Systems Analysis' in Anthony Giddens and Jonathan H. Turner (eds.), *Social Theory Today* (Stanford University Press, CA, 1987).

Walton, Douglas, 'Circularity' in: Ted Honderich (ed.), *The Oxford Companion to Philosophy* (Oxford University Press, 1995) p. 135.

Watson, Richard, *Cogito Ergo Sum: The Life of René Descartes* (Jaffrey, New Hampshire: David R. Godine, 2007)

Watters, Joanna, *Astrology for Today* (London: Carroll & Brown, 2003)

Weisfeld, Matt, *The Object-Oriented Thought Process* (3rd edn.) (Upper Saddle River, NJ: Addison-Wesley, 2009)

Weisskopf, Victor F., 'Prologue: What is quantum mechanics?' in Ajoy Ghatak and S. Lokanathan, *Quantum Mechanics: Theory and Applications* (Dordrecht: Springer/Kluwer 2004) pp. xv – xl. Originally in: Victor Weisskopf, *The Privilege of Being a Physicist* (New York: W. H. Freeman, 1989)

West, John Anthony, *The Case for Astrology* (2nd edn.), (London: Penguin, 1992 [1970 with Jan Gerhard Toonder as co-author]).

Wiener, Norbert, *Cybernetics – or control and communication in the animal and the machine* (2nd edn.) (Cambridge, Mass: M.I.T. Press, 1961 [1948])

Wikipedia contributors, 'Astrology', *Wikipedia, The Free Encyclopedia*, <https://en.wikipedia.org/w/index.php?title=Astrology&oldid=909527658> (accessed 12 August 2019)

Wilberding, James, *Plotinus' Cosmology: A Study of Ennead II.1 (40): Text, Translation and Commentary* (Oxford University Press, 2006).

Wilhelm, Richard (tr.) and Cary Baynes (tr.), *The I Ching or Book of Changes* (3rd edn.) (London: Routledge & Kegan Paul, 1968 [1951])

William of Sherwood, Norman Kretzmann (tr.), *William of Sherwood's Introduction to Logic* (Minneapolis, University of Minnesota Press 1966).

Willis, Roy, and Patrick Curry, *Astrology, Science and Culture* (Oxford: Berg, 2004).

Wilshire, Bruce, *The Primal Roots of American Philosophy – Pragmatism, Phenomenology, and Native American Thought* (Pennsylvania State University Press, 2000)

Wilson, Margaret D., 'Spinoza's theory of knowledge' in Don Garrett (ed.), *The Cambridge Companion to Spinoza* (Cambridge University Press, 1996), pp. 89 – 141.

Windelband, Wilhelm, Guy Oakes (tr.), 'Rectorial Address, Strasbourg, 1894' *History and Theory* Vol. 19, No. 2 (Feb. 1980) pp. 169 – 185. Source of translated text: Wilhelm Windelband, 'Geschichte und Naturwissenschaft' *Präludien* Band 2 (Tübingen: Möhr, 1924) pp. 136 – 160.

Winkelman, Michael, and Philip M. Peek (eds.), *African Divination Systems: Ways of Knowing* (Bloomington, IN: Indiana University Press, 1991).

Wittgenstein, Ludwig, G. E. M. Anscombe (tr.), *Philosophical Investigations (The German text, with a revised English translation)* 3rd edn. (Malden: Blackwell, 2001 [1953]) p. 182.

Woleński, Jan, 'The History of Epistemology' in Ilkka Niiniluoto, Matti Sintonen and Jan Woleński, *Handbook of Epistemology* (Dordrecht: Kluwer, 2004) pp. 3 – 54.

Zammito, John H., *A Nice Derangement of Epistemes: Post-positivism in the Study of Science from Quine to Latour* (University of Chicago Press, 2004).

Zuchowski, Lena C., *A Philosophical Analysis of Chaos Theory* (Cham, Switzerland: Palgrave Macmillan, 2017)

Interviews recorded for, and quoted in, this thesis.

In all cases the interviewer was Garry Phillipson. Where the interview took place over more than one day, the date shown is the date on which it was finalised. Where 'email interview' is specified, email was the exclusive medium; interviews recorded in person were also open to subsequent additions and amendments, by email, from the interviewee.

Adams, Jessica, email interview, 31st January 2005.
Clifford, Frank, 2nd August 2005.
Cochrane, David, email interview, 14th February 2006.
Costello, Darby, interview, 2nd July 2005.
Collis, Diana, email interview, 12th May 2011.
Dean, Geoffrey, Ivan Kelly, and Arthur Mather, email interview, 26th February 2008
Dwyer, Terry, email interview, 18th April 2004
Dykes, Ben, email interview, 18th February 2006
Eccles, Bernard, interview, 9th February 2005
Ertel, Suitbert, email interview, 19th March 2008
Hall, Judy, interview, 1st May 2005
Houlding, Deborah, email interview 23rd May 2005.
McDonough, Mark, email interview 7th August 2005.
Pierce, Kyle, email interview, 19th April 2008.
Press, Nona, email interview, 21st October 2005.
Smuts-Allsop, Nicola, interview, 16th January 2006.

Personal Communications:

Eccles, Bernard: email, 16th January 2009
Frawley, John: email, 18th September 2004.
Jones, Roger S.: email, 10th July 2009
Karcher, Stephen: email, 11th April 2008
Nasser, Rafael: email, 2nd August 2013