Harmonious Entrepreneurship: evolution from wealth creation to sustainable development.

Professor David A Kirby

University of Wales Trinity St. David,

Carmarthen. Wales UK

E-mail: Kirbydavid1@gmail.com

Orcid: 0000-0002-1179-6687

Dr Iman El-Kaffass

Independent Sr. Consultant, Organizational Strategic Development and Capacity Strengthening Montreal, Canada

Email: Iman.el-kaffass@mail.mcgill.ca

Mrs. Felicity Healey-Benson BSc, PGCE, MSc, MBA

Doctoral candidate, and an Entrepreneurial Learning Champion, International Institute for Creative Entrepreneurial Development, University of Wales Trinity St. David

E-mail: felicity.healey-benson@uwtsd.ac.uk

Orcid ID 0000-0003-4191-2164

Abstract

Purpose

The purpose of this article is to trace the evolution of entrepreneurship theory in order to explain why entrepreneurship has not been successful in addressing and to determine how it needs to change in order to address the sustainability challenge.

Design

The study is based on secondary data and an examination of actual cases that have addressed the challenge successfully.

Findings

The article concludes that entrepreneurship has failed to address the sustainability challenge because of its failure to appreciate that the planet is a system and its emphasis on "making as much money as possible". It concludes that for any

solution to be successful it must be based on systems thinking and should integrate or harmonise the traditional, separately applied approaches to entrepreneurship in order to produce a business model with a Triple Bottom Line, where Profit, Planet and People are in Harmony.

Limitations

The study is based on purposively selected case studies and needs to be tested in different geographical, politico-economic and industrial contexts.

Practical Implications.

The findings will have significance for entrepreneurship educators and trainers and will require that the "making as much money as possible" and shareholder satisfaction doctrines of business are replaced with a model that ensures Profit, Planet and People are in harmony.

Social implications

There needs to be a shift from shareholder to stakeholder satisfaction and an appreciation that the social responsibility of business needs to be founded on "ethical custom".

Originality

The research introduces a new operational model of entrepreneurship that is based on systems thinking and the principle of Harmony.

Keywords

Entrepreneurship; Harmony; Evolution; Wealth creation; Sustainability

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"We cannot solve our problems with the same thinking we used when we created them". (Albert Einstein)

Introduction

Ever since the research of Birch (1979) revealed that 2/3 of net new jobs in the USA were created by new small firms, Governments around the world have seen entrepreneurship as the panacea for unemployment and both the study and practice of entrepreneurship have taken on an increased significance. Though not new, the global significance and importance of sustainability¹ has also been recognised in recent years, and while entrepreneurship is recognised as having the ability to address the challenge and ameliorate its impact (Villar and Miralles, 2019), it has not done so to date. As a consequence, questions have been raised about whether entrepreneurship and sustainability are compatible (Gawel, 2012) and there is uncertainty about the role that entrepreneurship can play (Hall, et al 2010). Thus both "scholars and practitioners are therefore increasingly exploring whether modified and completely new business models can help maintain or even increase, economic prosperity by either radically reducing negative or creating positive external effects for the natural environment and society." (Schaltegger, et. al, 2016, 4).

In an attempt to recognise the issue of sustainability, new approaches to entrepreneurship have been introduced to complement the more traditional wealth and job creation approach. Most notable of these are Ecopreneurship² (Kainrath, 2011), Social Entrepreneurship³ (Borzaga & Defourny, 2001) and Humane Entrepreneurship⁴ (Kim et al., 2018), the latter being introduced most recently by the International Council for Small Business (ICSB). This promotes the idea that business should be done in a humane way and argues that "the assurance of wealth creation and continued operation only occurs when your employees and customers are confident that your business cultivates an environment of safety and health".

In 2007, Abrahamsson coined the term "Sustainopreneurship" – Business with a Cause - but despite it being recognised that the concept has the potential to be a catalyst "for transitioning from [the] current economy to a sustainable economy" (Iyigun, 2015, 1230), the problem remains even though it is recognised that "there should be some steps taken by policy makers and sustainopreneurs to promote eco-businesses" (Majidy and Yaqui, 2010, 23). Accordingly, as Hall et. al. (2010 440) have acknowledged there remains "considerable uncertainty

regarding the nature of this role and how it will unfold "while questions persist over whether entrepreneurship is compatible with the concept of sustainability (Gawel, 2012).

Aim and methodology

The aim of this research, therefore, is to examine why this is the case and to propose how entrepreneurship needs to evolve if it is to produce a new business model that will enable it to address the sustainability challenge. It does so by adopting a grounded theory type approach based, in part, on a consideration of the literature but largely operational, commercial business models. Hence the study presents and analyses purposively selected cases derived from secondary data and, where possible, non- participant observation. The case study approach has been adopted as the study is exploratory involving "how" and "why" question, which "lead to the use of case studies" (Yin, 1994, 6). Before doing so, however, it explores the origins of entrepreneurial thinking and how it has evolved, not least as "historical knowledge can be very useful in avoiding past mistakes or reinventing ideas that never really worked in the past." (Bergquist et al. (2019).

The origins and evolution of entrepreneurial thinking.

The origins of entrepreneurship are long and complex, dating back to at least the 18th century and the theories of classical economics. During this period several different schools of thought emerged, most notably the American, Austrian, British, French and German Schools. Each perceived entrepreneurship differently, particularly with respect to the role of the entrepreneur, as well as innovation, profit and risk. However even within the different schools, consensus was rare and different views were held. For example, in the French school, Cantillon (1680s-1730), believed to be the originator of the term, suggested that the entrepreneur engages in exchanges for profit and exercises business judgement in the face of uncertainty, but is not an innovator. In contrast Baudeau (1730-1792) suggested that the entrepreneur is an innovator who invents and applies new techniques to reduce costs and increase profits while Say (1767-1832), like Cantillon, distinguished between the entrepreneur and the capitalist, but saw the entrepreneur as a co-ordinator of capital, land and labour who was rewarded for his/her skills in estimating demand.

The situation was complicated further by the subsequent neoclassical approach to entrepreneurship that followed the "political economy" thinking of the classical economists and saw the economy as a system in which equilibrium is attainable (Glancey and McQuaid, 2000). In this "general equilibrium" model, there was little need for entrepreneurship and the entrepreneur was seen as a

superintendent or co-ordinator of the production process. However, under the partial equilibrium model introduced by Marshall (1842-1924) business development was seen to require more than just "superintendence" though no specific function was attributed to entrepreneurship. Marshall saw managing a profitable enterprise as requiring two important elements: the mental strain of organising and devising new methods and anxiety and risk. For him, profits were the payment for such services and not merely for the job of superintending the business.

The concept of risk was advanced further through the work of Knight (1885-1972), probably the first neo-classical economist to identify a specific entrepreneurial function other than superintendence. He distinguished between insurable (predictable) risk and uninsurable risk (uncertainty) and proposed that entrepreneurs make profitable decisions in an uncertain economic environment. For him, profit was a residual income generated by the actions of the entrepreneur after all costs had been deducted. This concept of uncertainty was taken further by Von Mises (1881-1973) who suggested that the function of the entrepreneur was to find the best use of resources in order to create the most value for consumers, while for Kirzner (1930-present) it was alertness that was important - the ability to see opportunities that others cannot see (opportunity recognition). Meanwhile Schumpeter (1883-1950) deviated from the general equilibrium model by seeing entrepreneurship as the source of change - through the introduction of "new combinations". The entrepreneur disturbs the status quo or equilibrium state and is, therefore, an innovator, profit being a surplus or residual that results from an innovative action. Thus there is no one standard definition of entrepreneurship or agreement on the role that it plays in the economy. For some it is about job generation and (Birch 1979, Storey 1994), for others it is about innovation (Schumpeter, 1943; Drucker, 1985) and for others (Kirzner 1973; Shane, 2003) it is about opportunity recognition. However, despite this ambiguity and uncertainty over what entrepreneurship is, a common feature has been its focus on profit and wealth creation which is at least partly why it has not addressed the sustainability challenge and has often contributed to it (see Saltaire case and Appendix A).

Its history with respect to sustainability dates back to the nineteenth century when, as the Saltaire case will show, it was "driven by the shock of seeing the negative impact of industrialisation on the natural environment, and especially the countryside and wildlife..." (Jones, 2017, 387). It was not until the last decades of the 20th century, though, that entrepreneurship began to address the issue of sustainability. In part this resulted from the way entrepreneurship was defined as Jones (2017) has acknowledged and in part from the fact that while the sustainability challenge has long been recognised, its severity and consequences

have been acknowledged, globally, only relatively recently. It was not until the founding of Greenpeace in 1971, for example, and the recognition in 1986 of the potential problems of global warming, that attention began to be paid to the sustainability challenge and particularly the impact of climate change on the environment. With this increased awareness there have emerged not only new techniques and entrepreneurship disciplines for dealing with the problem, as outlined above, but the concept of Corporate Social Responsibility (CSR). While CSR has a relatively long history, the concept has changed over time, and it is only since the 1990s that it has received global attention (Aqudelo et al. 2019). As Carroll (1991, 43) has recognised, the "total corporate social responsibility of business entails the simultaneous fulfilment of the firm's economic, legal, ethical and philanthropic responsibilities" but CSR has, perhaps, never achieved its true potential, particularly with SMEs (Fassin, 2008). Not only has the definition of it changed over the years but entrepreneurs and managers have struggled with the concept and the assumption that a proposed solution for large corporates can be transposed to SMEs. Hence it has been resisted and opposed in some quarters and is often focused on doing "less bad" rather than more good (Aguilera et al., 2007). The problem has been exacerbated by the Friedman (1970) doctrine that the responsibility of business is to its shareholders and to "making as much money as possible". Indeed, the contention here is that it is this doctrine, which has driven entrepreneurship for much of the past 50 years if not longer, that has caused it to neglect issues relating to both people and planet, thereby contributing to the contemporary sustainability challenge.

An examination of the problem

As Farmeir (2020, 81) has acknowledged, "attempts to induce sustainability transformations require models, but these models always run the risk of being too simple and thus of creating desired as well as entirely unexpected effects". To resolve this problem, she suggests, it is necessary to encourage more creative entrepreneurship questions. While eco, humane, social sustainopreneurship have been developed to address the environmental and people-related problems the world is facing, they have complemented the traditional economic approach, been applied independently and are too simple to solve what is a very complex problem. As Seager (2008, 447) has observed "In many cases experts have focused too narrowly on one or a few dimensions of sustainability, while excluding other facets."

For the purpose of this research the objective of entrepreneurship with respect to the sustainability challenge is "the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes and services for gain, where gain is broadly construed to

include economic and non-economic gains to individuals, the economy and society." (Shepherd and Patzelt, 2011). If entrepreneurship is not doing this, as it appears not to be, the question that has to be asked is why? It is contended here that the answer to this question—is that to date entrepreneurship has failed to recognise the systemic nature of the challenge. Although it has long been recognised that "sustainability is a systems-based concept and, environmentally at least, only begins to make sense at the level of ecosystems..." (Gray, 2010, 48), the entrepreneurial solutions that have been introduced do not appear to have acknowledged this. While—eco, humane and social entrepreneurship separately address the glocal environmental and people-related problems, they have complemented the traditional economic approach and been applied independently, not as a holistic solution to the sustainability challenge. Given the interconnectivity of the ecosystem it is not possible to address sustainability simply by focusing on one aspect of it. – this merely results in Farmeir's "desired as well as entirely unexpected effects".

As Sommer (2012) acknowledges, sustainability creates both tremendous opportunities and formidable threats, not least the realisation that it is no longer possible to succeed simply by satisfying shareholder expectation (Stubbs and Cocklin, 2008). Long-term enterprise success will depend on balancing the competing interests of the venture's stakeholders, including investors, society and the environment as Edgemann and Eskildsen (2014) have recognised. This requires a more integrated, holistic approach than has occurred previously (Adams et al., 2012) and involves perceiving the sustainability challenge as a system, comprising, in the terms of Evans et al. (2017), the

- Economy (Profit, return on investments, financial resilience, long-term viability, business stability),
- Environment (Renewable resource, low emissions, low waste, biodiversity, pollution prevention air, water and land),
- Society (equality, diversity, well-being, community development, secure livelihood, labour standards, health, and safety).

This will not be easy for, as Ehrenfeld and Hoffman (2013) have observed, in order for the planet to flourish, each of these sub-systems needs to be viable and healthy or, in the words of HRH The Prince of Wales et.al (2012), in harmony with each other. According to Belz and Binder (2017), this cannot be achieved simultaneously, only sequentially and they propose a six-phase process that includes: -

- Recognizing a social or ecological problem
- Recognizing a social or ecological opportunity
- Developing a double bottom line solution

- Developing a triple bottom line solution
- Funding and forming a sustainable enterprise
- Creating or entering a sustainable market.

As will be demonstrated, this need not necessarily be the case but because it is a relatively new concept, it is not fully understood by business or academia, and it is not clear how it should be done. Additionally, as Evans et al. (2017) have recognised, there is a paucity of case studies and empirical analyses which makes it even more challenging for firms. Hence the aim of this article is to examine the problem and provide, with concrete case examples, a proposal for an innovative business model of how entrepreneurship might address the challenge.

A Proposed systemic solution

Given the systemic nature of the problem it is not possible to address sustainability simply by addressing one aspect of it. According to General Systems theory (Von Bertalanffy, 2015) a system is a complex of interconnected and interacting elements or sub-systems that are open to, and interact with, their environment. Changing one part or element of the system, therefore, will affect the other connected parts, as well as the system as a whole. It is because of this that solving one problem generally creates other problems within the system. Hence, a new more holistic systemic approach to entrepreneurship is required if it is to address the sustainability challenge. Such an approach, known as "Harmonious Entrepreneurship", has been proposed by Kirby and El-Kaffass, (2021). It is based on Systems Thinking and Ashby's Law of Requisite Variety the first law of cybernetics (Ashby, 1968). This states that when the variety or complexity of the environment exceeds the capacity of the system the environment will ultimately destroy the system. Thus, for a system to be stable its variety must be equal to or greater than that found in its environment. Hence the proposed model integrates or harmonises the four approaches entrepreneurship (economic, eco, humane and social) thereby creating a holistic, systemic model that incorporates the Harmony Principles espoused by the Prince of Wales et al (2012) in order to address the sustainability challenge and the 17 Sustainable Development Goals (SDGs) of the United Nations. The harmonious enterprises resulting from this approach are defined as having "a vision for the future rooted in ethical innovation that results in change and improvement in economy and society while not harming or damaging people or the environment. Preferably it improves and replenishes them and leads to development that is both long-term and sustainable." (Kirby and El-Kaffass, 2021). The outcome is new, entrepreneurial business model that focuses not solely on wealth creation but on the SDGs of the UN and the production of a Triple Bottom Line model (Elkington, 1999) in which People-Planet-Profit are in Harmony.

Case Examples

The model is exemplified by SEKEM Holding (www.sekem.com), an awardwinning international Egyptian commercial enterprise that employs some 2000 people and has turned a hostile desert area into a thriving agricultural community (Mair and Seelos, 2006). In 1977 Professor Ibrahim Abouleish, an Austrian trained Egyptian Pharmacologist, established SEKEM, a commercial enterprise that now sells 150 organic products, employs 2000 people and has a network of over 3000 farmers who produce for the company. He was concerned about the overpopulation, unemployment, education, and parlous state of agriculture in Egypt, and his vision was to create a comprehensive, holistic business venture based on a synthesis of the anthroposophy of Rudolf Steiner⁶ and the Islamic values of equitable business and social responsibility. The resultant would not just create wealth and jobs but would promote sustainable agriculture and enable the employees and agricultural communities to improve their living conditions, health, education, and quality of life. To do this he introduced biodynamic agriculture, reclaimed some 684 acres of desert land, created a thriving agricultural community and reduced the use of artificial fertilisers and pesticides by 90%, while increasing cotton production by 30%.

Not only was he told that the project would not work but he faced numerous obstacles along the way, including opposition from both the pesticide manufacturers and the Egyptian Agriculture Ministry. Even so, he persevered, and the profits generated by the 10 SEKEM businesses enabled him to launch, in 1984, the Egyptian Society for Cultural Development, the SEKEM School in 1989 and a Medical Centre and mobile clinic, which provides healthcare and educational programmes for 30,000 rural inhabitants. Since 2000, some 1000 students have graduated from the company's vocational training centre, while in 2012 he opened a not-for-profit university (Heliopolis University) that specialises in sustainability, offers knowledge transfer programmes to employees, farmers and the community and hosts a business incubator.

During his life, Professor Abouleish received numerous awards for his visionary achievements and in 2003 SEKEM was a recipient of the Right Livelihood Award Foundation (the Alternative Nobel Peace Prize). The citation stated it was awarded for demonstrating

"how a modern business can combine profitability and engagement in world markets with a humanistic and spiritual approach to people and respect for the natural environment. The Jury sees SEKEM as a business model for the 21st

century in which commercial success is integrated with and promotes the social and cultural development of society through the 'economics of love'."

Since the formulation of the Harmonious Entrepreneurship concept in 2020, 60+ cases have been identified that exemplify and prove it (https://harmonious-entrepreneurship.org/). Two of these, one drawn from 19th century industrial England, the other a more recent start up dealing with a completely different problem in modern-day Kenya, have been selected, purposively, demonstrate. the concept in different geographical, economic and political environments, as well as industry sectors and time periods.

Saltaire - a 19th century English industrial village.

In 1851, the eminent English industrial entrepreneur, Sir Titus Salt !803)-1876), built Saltaire, now a UNESCO World Heritage site in the North of England. It is an industrial village built on a rural greenfield site, approximately 3 miles from the City of Bradford on the banks of the River Aire, close to the then Midland Railway line, with the Leeds and Liverpool Canal running through the centre. At that time Bradford, with a population of over 100,000, was the centre of the UK woollen industry, with some 200 factories, each belching out black, sulphurous smoke. As a consequence, it had become known as the most polluted town In England. Life expectancy in the town was low, just over 18 years, and there were regular outbreaks of cholera and typhoid resulting from the town's sewage being dumped in the River Beck, the source of drinking water. The living conditions of the employees were appalling. According to a feature in "The Bradford Observer" dated 16th October, 1845, the city comprised

"some of the most filthy and wretched abodes that the mind of man can conceive, in which misery of the lowest description was personified... No sewers, no drainage, no ventilation. Nothing to be seen but squalid wretchedness on every side..."

Sir Titus was aware of such conditions, and he knew, also, that a new invention, the Rodda Smoke Burner, produced very little pollution, so in 1842 he arranged for the burners to be fitted in each of his five factories. He then tried, as Mayor of Bradford, to persuade the Council to require all of the town's factory owners to install them. When, in 1850, he realised that this was not going to happen, he announced his plans to move from Bradford and build a new industrial community, Saltaire, on a nearby beauty spot described by one Sam Kidd in *The Reynolds* newspaper in 1857 as "romantic rural and beautiful". Speaking in 1853

at the opening of the mill, Sir Titus, a man of action rather than words, said of the location:

"From the beauty of its situation, and the salubrity of the air, a most desirable place for the erection of dwellings. Far be it for me to do anything to pollute the air or the water of the district...I hope to draw around me a population that will enjoy the beauties of this neighbourhood – a population of well-paid, contented, happy operatives". (The Bradford Observer, 1853).

In 1851 he commissioned the architects Lockwood and Mawson to design a super mill that had a production capacity for 30,000 yards of cloth a day and could employ 3000 people. Work commenced the same year and when completed in 1853 it was the largest and most modern mill in Europe. Noise was reduced by part of the mill being constructed underground and large flues were installed to remove the dust and dirt from the factory floor. As soon as the mill, built in warm yellow sandstone in the 15th century Italianate style, was completed Sir Titus started work on building the industrial community. By 1854, 1000 people were living there and 14 shops and 163 architect-designed houses and boarding houses had been built. When the project was completed in 1873, there were 850 houses, each with its own supply of fresh water, gas supply and outside toilet, a church, a school, a library a place for adult learning, a dining room for the workers, a wash house, a hospital, and a park.

When he died in 1876 it is estimated that over 100,000 people lined the route of the funeral procession and The *Bradford Observer* noted that though he did not succeed in realizing all his views nor in harmonising all relations between capital and labour he was the greatest captain of industry in England.

Sanergy (<u>www.sanergy.com</u>) an innovative entrepreneurial venture providing non-sewered affordable sanitation solutions to the urban poor of Nairobi.

Currently some 2.5 billion people globally do not have access to basic sanitation and some 1 billion defecate outdoors, exposing themselves, their families, and their neighbours to fecal bacteria. As a result, half of the hospital beds in developing countries are occupied by people suffering from diseases caused by poor sanitation and hygiene and at least half a million children die every year as a consequence.

In addition, it is estimated that the lack of proper sanitation costs the world \$223 billion a year but, even so, relatively scant attention has been paid to the problem. In 2013, however, the UN launched a Call to Action on Sanitation and in 2015 it introduced SDG 6 (Clean Water and Sanitation). Progress has been slow,

however, and in recent years the need for increased private sector involvement has been recognised. By 2030 it is believed that the global market for innovative low cost sanitation will be some \$6 billion, suggesting a potential role for entrepreneurship.

One such innovative entrepreneurial venture is Sanergy (www.sanergy.com) a franchise company that provides non-sewered affordable sanitation solutions for the urban poor. The venture, which opened in November 2011, is the brainchild of three MIT MBA students who were required to find a solution to a problem facing 1 billion or more poor people globally. After brainstorming the three, who were interested in systems thinking, agreed that in most developing countries the sanitation system needs addressing and that it could be done profitably if a systems approach was adopted.

In November 2011, they opened Sanergy in one of Kenya's largest slum areas Mukuru Kwa Njenga, housing an estimated population of 500,000 on the outskirts of Nairobi. Today it employs some 250 people, 60 per cent of whom live in the areas the venture serves, has installed 772 toilets, removed over 7000 metric tons of waste, and created 779 jobs, 93 percent for Kenyans. It has done this by creating a network of not for profit low-cost waterless "Fresh Life" toilets that are franchised to schools and local micro entrepreneurs and landlords who operate them as a business. Sanergy then supports its franchisees, helps them to promote their franchise and secure customers and supplies them with a pack that includes a uniform, a sign and a bucket and soap. The franchisee then charges the user a small fee for using the facility and the franchise are being maintained.

While franchisees can earn something in the order of \$1000 a year from a Fresh Life toilet the benefits are much greater. As Lyndsay Stradley, one of the cofounders, recognises a city is a system of networks and when one network, in this case the sanitation system, is missing the other networks cannot fully function. Apart from increasing the pressure on the health facilities the lack of an adequate sanitation network loses Kenya an estimated \$1 million a day, pollutes the environment and impacts negatively on the safety and education of the young, particularly girls and women through the lack of safe, private hygienic toilet facilities. With the introduction of the "Fresh Life" sanitation network, such conditions have been ameliorated, particularly girls and women are safer than previously and school attendance has increased by some 20 per cent, with one school reporting that as a result of Fresh Life toilets it has increased its pupil numbers to over 200.

Sanergy also collects the waste daily, for a fee, using trained waste collectors who are provided with personal protective clothes and equipment, inoculations against

waste-borne diseases and health insurance. The waste is taken to a for profit Sanergy "Farm Star" centre where it is converted into organic fertiliser (Evergrow) and animal food and sold to farmers. In theory they should then be able to increase their yields and revenues and help retard soil degradation, important in a country where 80 per cent of the population depend on agriculture and there is a demand for 270 million tonnes of organic fertiliser a year. However, finding customers has not been easy so Sanergy offered free trials to farmers who could see the benefits (a 30 per cent increase in productivity) for themselves. Additionally, in 2012, with the support of the Bill and Melinda Gates Foundation, Farm Star started to use its solid waste to breed colonies of Black Soldier Fly larvae, which were then converted into animal feed, replacing the traditional fish meal feeds that were becoming unreliable because of overfishing in Lake Victoria.

Since November 2020 Sanergy has been operating, in partnership with Kisumu Water and Sewerage Company, in Kisumu the third largest city in Kenya. Here more than half of the population live in slums with limited sanitation and the intention is that by 2025, Fresh Life Toilets will be serving over 1 million people. At the same time, Sanergy is exploring the possibility of converting organic waste into electricity and also constructing a new large-scale recycling factory that will enable it to convert 72,000 tonnes of organic waste into fertiliser, animal feed and clean energy. Thus, they will not just be introducing safe, hygienic sanitation but rebalancing the ecosystem and helping stem environmental pollution.

Discussion

The solution adopted by SEKEM produces a harmonious business model that integrates or harmonises economic, eco, humane and social entrepreneurship – and the authors contend that if entrepreneurship is to address the sustainability challenge it needs to see problems and opportunities more holistically and harmoniously, rather than as unrelated elements in what is a highly interconnected system. The SEKEM case shows the positive effects of entrepreneurial innovation on the economy, the environment and society that may be derived from a harmonised approach to entrepreneurship. SEKEM could not have been as successful commercially if it had not cared for and educated its workforce or ensured the sustainability and fertility of the environment. As Gawel (2012, 14) has concluded, though, the pro-ecological and pro-social postulates of sustainability must be integrated into the strategy of the firm, especially if the triple bottom line ecological, economic, and social goals are to be achieved simultaneously and not sequentially as Belz and Binder (2017) have suggested. Thus, the model demonstrates how entrepreneurship might contribute to what Schaefer et al. (2015) refer to as "sustainability-as-flourishing". If sustainability

is to flourish, and both the mistakes of the past and future damage are to be avoided, a holistic, harmonious approach to entrepreneurship is required. The newly emerged approaches to entrepreneurship need to be integrated or harmonised and the likely ramifications of any innovation need to be anticipated and addressed. New and existing MSMEs need to integrate them into their strategic plans from the outset.

The further exemplary case studies demonstrate that both Sir Titus Salt and the founders of Sanergy clearly recognise the inter-connectivity of the sustainability ecosystem and the value of applying systems thinking to entrepreneurship in order to address the sustainability challenge. While the primary objective of Saltaire was the environment, its secondary objective was social, improving the wellbeing of the workforce, their living conditions, education, and health. Similarly, whereas the primary objective of Sanergy is to resolve the social issue of sanitation it has also addressed the environmental issues resulting from agricultural degradation and helped in the reduction of poverty by creating wealth and jobs. At the same time, it has increased the safety of girls and women and made education more accessible to them. Thus by adopting a harmonious approach to entrepreneurship, based on systems thinking, Sir Titus Salt harmonised economic, eco, humane and social entrepreneurship by addressing at least 11 of the United Nations 17 SDGs (1, 2, 4, 6, 8, 9, 10, 11, 12, 13 and 15) while Sanergy can be seen to have contributed not just to SDG 6 (social entrepreneurship) but to SDG 15 (ecopreneurship), to SDGs 1 and 8 (economic entrepreneurship) and to SDGs 3 and 5 (humane entrepreneurship).

Implications of the model.

While the model does not imply the abandonment of the individual economic, eco, humane and social approaches to entrepreneurship, it does imply the adoption of a more integrated, holistic systemic model if entrepreneurship is to impact on the global sustainability challenge. Thus, the model has implications for both new and established ventures, whether large or small, as well as for those members of the support network who advise, mentor, and train them. In particular it has implications for educators and those responsible for the training of future entrepreneurs. To educate "students" to become entrepreneurs capable of creating new harmonious models of business that address the Sustainability Challenge requires a change in both the content and pedagogy of learning as Lans et al. (2014) and Ploum et al. (2018) have demonstrated. It is necessary not just to educate the participants in how to launch and grow a new venture or to develop in them the attitudes and competences of the harmonious entrepreneur, but to introduce them to such issues as sustainability and its importance, the concept of systems thinking, Harmonious Entrepreneurship, the characteristics of the

Harmonious Entrepreneur and the importance of ethics. Such topics will have to be added to the traditional Entrepreneurial Education content/curriculum with the students developing their understanding and capability experientially (Kirby, forthcoming).

Similarly, it will require entrepreneurship moving away from the widely held Friedman doctrine that the sole responsibility of business is to "make as much money as possible". As mentioned above this has tended to dominate business practice for much of the past 50 years or more, together with the concept of shareholder satisfaction. Both entrepreneurs and business leaders need to focus on what Friedman (1970) actually said, namely that business is about "making as much money as possible while conforming to the basic rules of society both those embodied in law and those embodied in ethical custom". Though laws relating to the environment and its protection are evident in all developed and many developing economies they are relatively recent. Certainly, this is the case when compared with ethical custom relating to the environment, which is much longer established. Most of the major religions of the world recognise the need to respect and protect the planet and the ancient Chinese religion of Taoism, for example, is based on the harmony between nature and humanity, while Hinduism is rooted in nature and encourages environmental protection. Similarly, in both the Hebrew Bible and the Old Testament it is noted that "The Lord took the man and put him in the garden of Eden to work it and keep it" (Genesis, 2:15), while in Islam the Prophet MOHAMED specifically observed that "The world is green and verdant and verily God, the exalted, has made you his stewards in it". Interestingly, the Qur'an does not just focus on the environment but addresses, directly, a broader, more holistic concept of sustainability as El-Bassiouny et al. (2022) have acknowledged.

Thus there needs to be a move away from the narrow focus on profit maximisation and shareholder satisfaction to the broader concept of the stakeholder - employees, suppliers, customers and all of those with responsibility for protecting the environment. Such a change will pose a significant challenge for entrepreneurship and the academic support community, not least as further stakeholder theory-based research will be needed, particularly into how enterprises can best initiate relationships with their stakeholders and create value for each other (Pollack et al., 2017).

Conclusion.

The aim of this article hast been not just to identify a new business model for entrepreneurship that would enable it to address the sustainability grand challenge, but to inform future entrepreneurship research and practice. It has revealed that in accordance with systems thinking, entrepreneurship needs to recognise the interrelated components of the sustainability challenge and instead of addressing aspects of the problem separately and independently, treat them more holistically and systemically. This requires the integration or harmonisation of the four main approaches to entrepreneurship – economic, ecological, humane, and social – in order to ensure harmony and a business model with a triple bottom line of profit, planet and people. To achieve this will require the abandonment of the doctrine that the responsibility of entrepreneurship is "to make as much money as possible" and will mean, also, that businesses should no longer be thought of as discrete entities with distinct boundaries between them, as Larsen (2000) has observed.

The proposed model provides a solution to the sustainability challenge based on systems thinking and the principles of harmony, and while it is modelled on a real life Egyptian case, and is exemplified here by two cases drawn from 19th century England and 21st century Kenya, there is a need to test it in different politicoeconomic, physical and industrial contexts. Hence there is scope for further research, not least as the problem involves the interaction between human and natural systems which is poorly understood and needs further investigation as Seager (2008) has recognised. Perhaps the most urgent need, though, is for action research as there has been "an explosion of sustainability rhetoric but far too little absolute progress in reducing (never mind improving) the environmental and social problems society faces today" (Tilley and Young 2009, 91). Holistic, integrated experimental projects similar to those presented here are required and their outcomes and experiences need to be monitored and learned from. As HRH the Prince of Wales et al. (2010, 3) have recognised, though, "the many environmental and social problems that now loom large on our horizon cannot be solved by carrying on with the very approach that has caused them". The ethicality of the present disaggregated model of entrepreneurship in which the emphasis is on "making as much money as possible" has been questioned (Jones and Spicer, 2009, and Chell et al., 2016) and cannot remain if the sustainability challenge is to be addressed. In Schumpeter's (1943) parlance "new combinations" are required not just to disturb the status quo as he suggested but to conform, as Friedman (1970) proposed, "to the basic rules of society" ... embodied in ethical custom", By so doing harmony will prevail and thereby enabling "all things under the sun to flourish" (Xun Zi, 310-23 BC).

Appendix 2. Coal Mining in Wales

Wales, often referred to as "the land of song", is probably best known for the production of high-grade steam coal. At one time Cardiff, the capital, was the largest coal exporting port in the world and mining, which produced 57 million

tons of coal, provided employment for some 232,000 people, mainly men. There can be no doubt that not only did it create jobs, but it generated wealth – for the UK and such landowners as Lords Aberdare (the Parliamentarian Henry Bruce) and Merthyr (William T Lewis). However, it did so at a cost. Not only were the wages of the miners themselves kept deliberately low (resulting in the Tonypandy or Rhondda riots of 1910-11) but some 6000 miners died in mining disasters though this was only 17 per cent of the total number of deaths caused by mining accidents and pneumoconiosis (miner's lung). But this was not all, the dust from the mines blackened the landscape and polluted the atmosphere, thereby contributing to the often fatal respiratory diseases that afflicted not just the miners themselves but their families.

On top of this there was widespread ecological destruction. The collieries not only deposited waste in the watercourses but used them to wash their coal, thus polluting the rivers and destroying the river ecology. Deforestation occurred as a result of the need for pit props, while the waste that was dumped on the surface as "spoil tips" not only degraded the Welsh landscape but resulted, in 1966, in the Aberfan Disaster. On 21st October, at 9.15 am, one of the 7 spoil tips slid down the mountain killing 144 people including 116 innocent School children aged between 7 and 11 years, together with 5 of their teachers. The tip was 111 ft (34 mts) high and contained 300 cubic yards (229,300 cubic metres) of waste which turned into "a glistening black slurry" that came hurtling down the mountain at a speed of 80 miles per hour engulfing Pantglais Junior School and 19 houses. The ages of those killed ranged from three months to 82 years.

Although some of the landowners, people like William T Lewis, gave generous benefactions to education, hospitals, social welfare, etc, the case exemplifies what can happen when the social responsibility of business is, as Friedman (1970) claimed, to "make as much money as possible". When economic entrepreneurship is not in harmony with environmental, humane, and social enterprise, it has a negative impact on the sustainability challenge, one that lasts for generations. While the mines of the Welsh coalfield were closed in the 1980s, and some 25,000 mineworkers lost their jobs, the entrepreneurial scars, both physical and mental, remain, affecting both planet and people.

Notes

- 1. Sustainability is meeting the needs of the present without compromising the ability of future generations to meet their needs.
- 2. Ecopreneurship may be defined as entrepreneurship that addresses and finds innovative sustainable solutions to environmental problems.

- 3. In Social Entrepreneurship the aim is not to create wealth but to find innovative solutions for community-based problems.
- 4. Humane Entrepreneurship embodies the cultural values of empathy, equity, empowerment and enablement for employees.
- 5. Under some definitions of social entrepreneurship, the environment is considered but usually the focus is on only one aspect of the problem, social or environmental.
- **6.** A system of teaching and helping people to become as mentally and physically healthy as possible.

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