

A new harmonised approach to sustainability: implications for entrepreneurial leadership in the Middle East and globally

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ABSTRACT

Purpose

The study considers how entrepreneurship, and its leaders need to adapt to address the sustainability challenge.

Design

It adopts a grounded theory style approach and is based on a case study derived from participant observation and secondary data.

Findings

The article contends that to address the sustainability challenge requires a new approach to entrepreneurship that is based on systems thinking and the Principle of Harmony. It suggests the need for less emphasis to be placed on "making as much money as possible" and that there should be broader focus on the development of community entrepreneurship and the creation of Civic entrepreneurs.

Limitations

The research is based on a case study of one entrepreneur and the internationally renowned enterprise and community he created. The findings need to be tested in different contexts.

Practical Implications

Known as Harmonious Entrepreneurship the concept requires the integration of the four main approaches to entrepreneurship (economic, eco, humane and social), abandonment of the Friedman (1970) mantra that the responsibility of business is to make as much money as possible and a change in the mindset and competence requirement of the entrepreneurial leader.

Social implications

The findings imply the need to change the way entrepreneurship is taught and entrepreneurial leaders are trained and developed. Also, they suggest the need to focus on community entrepreneurship and the creation of Civic Entrepreneurs.

Originality

The article introduces a new, more holistic approach to entrepreneurship in order to address the sustainability challenge. It is based on a study of the vision and achievement of an Islamic entrepreneur and has implications for entrepreneurship, entrepreneurial leadership and entrepreneurship education and training. It will be of interest to entrepreneurship scholars, educationalists and those concerned with the promotion and development of entrepreneurship, as well as all agencies and individuals concerned with the future of the planet and its people. Recommendations are made for further research and verification.

KEYWORDS

Entrepreneurial leadership; sustainability; new approach; Harmony; Middle East; Egypt

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Introduction

The importance of entrepreneurship to economic development has long been recognised and traditionally it has been seen as an important contributor to wealth and job creation (Birch, 1979). As a consequence, the most recognised and celebrated entrepreneurial leaders have tended to be those most successful in terms of their income generation and personal wealth (Kirby and Ibrahim, 2009). Often in the process, however, the generation of jobs and wealth has been at the expense of the environment and the well-being of society (Appendix 1) even in countries like Egypt where heavy industry is not highly developed¹. Particularly since the introduction of the UN's Sustainable Development Goals in 2015, it has been recognised that this is no longer acceptable and that the responsibility of entrepreneurial leadership is not about "*making as much money as possible*" (Friedman, 1970) and satisfying the shareholders but about protecting and enhancing the environment and its people. As Elkington (2004) has suggested it needs to be about profit, planet, and people, not just profit.

In the main, this has not happened despite the introduction of initiatives such as Corporate Social Responsibility (Aquadelo et al., 2019) and such new approaches as eco (Kainrath, 2011), humane (Kim, et al., 2018) and social (Borzaga and Defourney, 2001) entrepreneurship. As a consequence, questions have been raised about the compatibility of entrepreneurship and sustainability (Gawel, 2012) and both academics and practitioners have begun to search for a new entrepreneurship business model (Schaltegger et al., 2016). One such approach is "Harmonious Entrepreneurship" (Kirby and El-Kaffass, 2021) which is based on systems thinking and which integrates the four main approaches to entrepreneurship (economic, eco, humane and social) in accordance with the Principle of Harmony (HRH The Prince of Wales et al., 2010). It is exemplified by the thinking and practical application of the late Egyptian Entrepreneur Professor Ibrahim Abouleish (1937-2017).

Aim and methodology

The aim of this article is to consider the needed characteristics and attributes of entrepreneurial leaders if entrepreneurship is to address the sustainability challenge. It is an inductive piece of research based primarily on a case study (Yin, 1994) of Professor Abouleish derived from secondary data complemented

by non-participant observation. It adopts a grounded theory type approach (Glaser and Strauss, 1967) and accordingly is not based on an extant body of literature or existing understanding. Rather it is an exploratory investigation for which, as Yin observes, the case method is well suited. It interprets the case in the context of systems theory and the principle of harmony and discusses the implications of the findings for Entrepreneurial Leadership and the education and training of entrepreneurs.

Case Study: An Egyptian Entrepreneurial Leader.

Professor Abouleish, an Austrian trained Egyptian Pharmacologist, was a much-studied award-winning entrepreneurial leader (Mair and Seelos, 2006; Kirby and El-Kaffass, 2022). In 1977, he established SEKEM², a commercial enterprise that 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 in an attempt to address this decided to create a comprehensive, holistic business venture based on a synthesis of Islamic values of equitable business and social responsibility and the anthroposophy of Rudolf Steiner³. The venture 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 bio-dynamic 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%.

His original vision was to create *“a community dedicated to the holistic development of its workers and all of its stakeholders – a model that would transform Egyptian agriculture and act as a force for positive change...”* (Abouleish and Abouleish, 2008, 24). So he started looking for land he could purchase and after rejecting more favourable sites, settled on a 70 acre site that everyone agreed was unsuitable, his logic being that if the biodynamic farming he envisaged *“could thrive in this wasteland and under such extremely adverse conditions, then it would be possible to transfer this model to easier environments”*. Although he was told the project would not work which only made him more determined, he began to plan the development. This included infrastructural facilities such as roads, wells and a 30-metre-wide band of trees as well as houses, a school, medical centre a social centre, stables and the businesses that would finance the venture. When the project was first launched, he planted 120,000 casaurina, eucalyptus and Persian lilac seedlings, engaged the internationally renowned Egyptian architect, Hassan Fathy, to design traditional adobe housing and engaged and housed the native Bedouin residents.

To do this, though, he needed money and began to think how he could use his pharmacological knowledge to generate income. While so doing, he heard of an American company that was looking to purchase an extract of the plant *Ammi majus* from Egypt. Although he had never heard of the plant nor knew how to obtain it, he researched it thoroughly, invited the Americans (the American Elder Company of Ohio) to meet with him and, after a period of studying the commercial feasibility of the project, entered into a contract with them to start supplying ammoidin, the crystallised active ingredient present in the seeds. To fund the project he established The Sekem Company as an investment company (with his two children) and entered into “partnership” with an Islamic bank that took 40% equity in the business. Following an audit of the company, the state investment authority discovered that its estimated value was considerably higher than the book value which meant that the bank was required to pay more for its involvement. It was reluctant to do this and demanded back its 150,000 EGP investment, which had been spent already. As he was not able to raise funding from any of the other banks until the disagreement was settled, the Professor eventually raised 100,000 EGP from an “angel investor”. Unfortunately, after two months the investor also wanted his money back but the Egyptian National Bank, recognising that there was no risk as the funding would be covered by the equity in the land and property as well as the American contract, agreed to lend him the money and he started building the laboratory and processing rooms to produce the ammoidin. This required a 30 metre high chimney which he, his son and his employees built themselves, as well as a steam generator which he created from an old wood-powered German steam locomotive that he acquired from a scrap dealer. After several successful years the owner of the Elder company died and as his family did not wish to continue trading the contract was terminated. A new line of business had to be sought.

Despite opposition from the Egyptian Agricultural Ministry who banned his biodynamic agriculture and composting, his vision of an oasis in the desert was beginning to take shape. It took him 12 months to persuade the Ministry that his methods would not “infest the whole country” which was their concern and they sent inspectors to analyse the soil, something they did at regular intervals for the next 10 years. So, he could now operate once more, having been prevented from doing so previously by the police. Then, one morning he found bulldozers pulling down thousands of the trees he had planted as the land had been acquired by the military. Despite knowing the then President of Egypt, Anwar Sadat, and holding meetings with the Minister and the then Deputy President, Hosni Mubarak, it took weeks before the decision was reversed and all of the military machinery was removed. Meanwhile, it turned out that the intention had been to establish a co-operative with single plots of land for officers on 3000 hectares of desert, so he persuaded the authorities that his could be done not on his land, but on adjacent

land. So the land around SEKEM was then divided into small plots of 5-10 hectares for each officer and a co-operative was established.

Although his intention had been to sell fresh produce SEKEM had only produced fresh foods for its own use and it was not until he met a Greek Cypriot who was growing and exporting fresh produce to England that the opportunity arose. The man had been advised to enter into partnership with SEKEM which Professor Abouleish found of interest, but he was opposed to the use of artificial fertilisers, pesticides and hybrid seeds. However, he made a quick decision and founded the Libra Company, in which SEKEM held a 50% share. When, eventually, the partnership was dissolved, amicably, SEKEM had learned a great deal about the marketing of fresh produce. Once Libra was in place he started to produce organic vegetables. These proved costly, partly because it was difficult to get the seeds needed and partly because the yield was about half of that which they had forecast. Additionally, a sandstorm destroyed their greenhouse and their efforts to date. Even so, he remained confident and committed and established a new logistics company, Hator, to ensure the produce would be delivered speedily from the fields to its correct destination without spoilage and loss of revenue. The company was managed by Professor Abouleish's wife who trained 70 young women in SEKEM's Centre for adult learning, and they then checked for quality and ensured all necessary processes were performed swiftly and correctly.

However, further problems arose when pesticide residues were found on their medicinal plants. The residues came from the planes spreading pesticides on the neighbouring cotton fields. So, they began to look at how the cotton plants could be protected organically, and two Egyptian scientists developed an organic method of stopping the insects that were destroying the cotton plants from multiplying. As a result their crops produced a 10% higher yield than the average for the area and they presented their findings at the world's first international organic cotton conference held in Cairo. Their results were well received but for the next three years they were required to continue testing all over Egypt before the Minister stopped the application of pesticides. Initially this was on 200,000 hectares of land and one year later on the total cotton crop production in the country. Shortly after this ban on the use of pesticides articles appeared in the newspapers questioning the benefits of organic farming and stressing the need for artificial fertilisers in order to feed the world's poor. SEKEM was named in them and accused of wanting to let people starve. Professor Abouleish even received anonymous threatening phone calls and one day an article appeared in the local newspaper under the heading "The Sun-Worshippers" claiming SEKEM's Round House and other round objects were all symbols of the sun. As a consequence SEKEM workers were harassed, stones were thrown at them and the local prayer leaders in the mosques around SEKEM began to stir up animosity against them. So, he invited all of the people opposed to them to meet with him, countered their

objections with quotations from the Koran and demonstrated how biodynamic agriculture is in keeping with the teachings of Islam, whereas artificial fertilisers and pesticides are in contravention of it. Eventually one man got up and hugged and kissed him. Shortly after the meeting closed with the sheikhs content that the venture was founded on Islamic principles.

By 1984, SEKEM had grown to have 10 businesses which enabled Professor Abouleish to launch 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. In 1997 he opened a Vocational Training Centre from which, since 2000, some 1000 students have graduated, while in 2012 he opened a not for profit university. This 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. These included being appointed as a councillor at the World Future Council in 2006, and, in 2013, receiving the Schwab Foundation's "Outstanding Social Entrepreneur" Award, and the Global Thinker Forum Award for Excellence in Positive Change, as well as becoming an Oslo Business for Peace Honoree of the Business for Peace Foundation. His vision and achievements had been acknowledged previously, however, by the Right Livelihood Award Foundation (the Alternative Nobel Peace Prize). In 2003 SEKEM was a recipient of the award 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’.”

Discussion

Harmonious Entrepreneurship (Kirby and El-Kaffass, 2021) is epitomised by the SEKEM model. It sees the sustainability challenge as a system in which the various components or facets (the economy, the environment and the people) are interconnected and required to be in harmony with each other. Accordingly, changing one facet or component impacts on the other connected components, which explains why the pursuit of just one sustainability objective can impact negatively on the other connected elements (as seen in Appendix 1) and has resulted in the sustainability crisis currently facing the planet..

Clearly the SEKEM model is very different from the traditional model of entrepreneurship which, for the past 50 years at least, has been concerned with maximising shareholder satisfaction and “*making as much money as possible*” (Friedman, 1970). However, questions have been raised in recent years about “*the idea that profit seeking is good for economic development and that profit maximisation is the consistent means to measure the performance of entrepreneurial behaviour*” (Parente et al., 2018, 30). Indeed, it has been recognised that such financially based business models may be resulting in “*the irreversible depletion of economic, social and natural capital*” (op. cit, 30) and it is for this reason that both academics and practitioners have been searching for a new definition of entrepreneurship. The proposed Kirby and El-Kaffass Harmonious Entrepreneurship model is a holistic, systemic business model that integrates or harmonises the four main approaches to entrepreneurship (economic, eco, humane and social) and yields Elkington’s (2004) Triple Bottom Line of Profit-Planet-People required to sustain financial performance long-term.

While this model does not replace the traditional entrepreneurship models, it does demonstrate how entrepreneurship can address the sustainability challenge and produces a model that better captures the current world in which we live, one of the objectives of the research undertaken by Parente et al. (2018). Accordingly, the proposed model differs markedly from previous models and has implications for entrepreneurial leadership, the role of the entrepreneurial leader and the education and training of entrepreneurs.

Implications for entrepreneurial leadership

As Leitch and Vallery (2017) have acknowledged, the study of entrepreneurial leadership is very much in its infancy and lacks definitional clarity. Even so, it “*is becoming a global necessity and the more we can understand the elements that comprise this concept the more we can advance the concept itself*” (Kuratko 2007, 8). Meanwhile in their study of the concept Fernald Jnr et al. (2005) examine the characteristics of successful leaders and entrepreneurship. They conclude that the common characteristics are visionary, risk-taker, achievement orientated, able to motivate, creative, flexible, persistent and patient.

Clearly the Harmonious Entrepreneurial leader will need to possess such competences of the traditional entrepreneur. As an entrepreneurial leader, Professor Abouleish would certainly have rated highly on the five dimensions⁴ of Caird’s General Enterprising Tendency Test (Caird, 1991) and his story demonstrates that he possessed all 19 of the entrepreneurial competences⁵ identified by Timmons et al. (1985) plus others, such as

- ability to see and seize opportunities,
- courage,
- persistence and endurance
- self-belief,
- persuasiveness
- networking capability.

However, sustainability focused entrepreneurial leaders differ from more conventional entrepreneurs particularly in their desire to change the world and it is necessary, therefore, *“to acknowledge the orientation and motivation of the entrepreneur to include non-economic goals in the entrepreneurial ventures”* (Villar and Mirales, 2019., 106). Clearly, the case highlights Professor Abouleish’s concern for both the environment and society and his desire to address the economic and social problems facing Egypt. At the same time, it demonstrates his:

- Creativity, foresight and vision
- Ability to think strategically
- Interdisciplinary competence (including commercial awareness)
- Understanding of systems thinking and the inter-connectivity of the ecosystem
- Action orientation and practical capability
- Ability to motivate and empower others.
- Spirituality

Table 1. Required Competences of the Harmonious Entrepreneur.

Competence	Lans et al. (2014)	Ploum et al. (2018)	Professor Abouleish
Creativity, foresight and vision	+	+	+
Ability to think strategically	+	+	+
Interdisciplinary competence (including commercial awareness)	+	+	+
Understanding of systems thinking and the inter-	+	+	+

connectivity of the ecosystem			
Action orientation and practical capability	+	+	+
Ability to recycle and save waste			+
Ability to motivate and empower others			+
Spirituality			+
Normative competence	+	+	

- + denotes the presence of a required attribute

As shown in Table 1, several of these competences have been identified, previously, by Lans et al. (2014) and more recently by Ploum et al. (2018). Noticeably there is one particular difference. Professor Abouleish was a very religious and spiritual person⁶, what Kauanui et.al. (2008) refer to as a “*Make me whole*” entrepreneur. Such entrepreneurs, according to them, are “*extremely passionate about their work, believing that work impacts, inspires and changes the lives of those they work with, especially employees*” (op.cit., 174). Despite Weber’s concept of the “Protestant Work Ethic” and its links with capitalism (Weber, 2005), attention to spirituality, and its impact on business performance, has been recognised only relatively recently (Benefiel et al., 2014). While it might be particularly difficult to inculcate spirituality, these are the sort of competences, including ethics and morality, that will be needed by harmonious entrepreneurial leaders in order to address the issue of sustainability. As El-Bassiouny et al. (2022) have recognised these and the sustainability mindset are particularly compatible with the teachings of Islam and the Holy Qur’an.

Implications for the role of the entrepreneurial Leader

Although entrepreneurship can apply to all human activity (Kirby, 2003), it has tended to be associated with business and new venture creation. This will continue to be the case under the Harmonious Entrepreneurship model but both entrepreneurs and business leaders will need to move away from the narrow focus on profit maximisation and shareholder satisfaction to the broader concept of the Triple Bottom Line and stakeholder satisfaction - employees, suppliers, customers and all of those with responsibility for protecting the planet and its people. Such a change will pose a significant challenge for entrepreneurship 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 as Pollack et al. (2017) have recognised.

While the sustainability crisis that is threatening the planet is global, attention does need to be paid to the local as is recognised in the Terra Carta⁷. This was introduced by HRH The Prince of Wales at the One Planet Summit in Paris in January 2021. However, the magnitude and urgency of the sustainability challenge is such that perhaps the focus of attention needs to shift from creating stand alone new ventures, that frequently do not survive or grow, to the creation of entrepreneurial communities and regions, where the residents take ownership and responsibility for their own destinies and where they are accountable for the impact of their actions on the planet. Thus instead of focusing on business entrepreneurs, ecopreneurs, humane entrepreneurs or social entrepreneurs, perhaps the focus needs to be broadened to include the development of entrepreneurial leaders, like Professor Abouleish, who can initiate change and improvement in the community – civic entrepreneurs (Leadbetter and Goss, 1998) who empower society by releasing the potential within the community and facilitate the formulation and implementation of innovative initiatives that resolve local problems or contribute to local development, without harming people or the environment.

Implications for education and training

Such changes inevitably will have implications for the training and development of educational leaders. For some time it has been recognised that there needs to be a paradigm shift in the teaching of Entrepreneurship both globally (Kirby, 2007) and in the Middle East (Kirby, 2017). This has required a move away from passive to active learning and from left to right-brain thinking, with the emphasis not on knowledge acquisition but rather on skill or competence development. The adoption of the Harmonious Entrepreneurship model requires a further paradigm shift, however, that 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 will have implications for entrepreneurship educators and those responsible for the training of future entrepreneurs. To educate students to become Entrepreneurial leaders 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 develop in the participants the attitudes and competences of the entrepreneur or to educate them in how to launch and grow a venture, 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 have to be added to the traditional Entrepreneurial Education content/curriculum with the students developing their understanding and capability experientially (Kirby, forthcoming).

At the same time, it has to be recognised that entrepreneurship education is not just for business administration students but for students of all disciplines and needs to be part of the core curriculum. As the European Commission (2008, 7) has acknowledged entrepreneurship *“is a key competence for all, helping young people to be more creative and self-confident in whatever they undertake”*. The emphasis must be, though, not on new venture creation and how to write a business plan but how to think and behave entrepreneurially – on seeing opportunities and harnessing the resources to bring such opportunities to fruition, in the process bringing about change and improvement. As Roomi and Harrison (2011) have concluded, entrepreneurial leadership education should be about enabling students to *“become proficient in exploiting opportunity, maintaining their team’s core competencies for pursuing innovation and gaining competitive advantage for their organisations in uncertain environments – in short to become entrepreneurial leaders”*.

Conclusion.

The study aimed to identify the traits and competences needed by entrepreneurs and entrepreneurial leaders if entrepreneurship is to address the sustainability challenge. From the SEKEM case study it discovered that

- the harmonious entrepreneurial leader conforms to the typical profile of the entrepreneur but has an additional set of values and attributes that reflects his/her focus on the sustainability challenge and the need to recognise the interconnectivity of components that constitute the challenge.
- in accordance with systems thinking (Von Bertalanffy, 2015) and Ashby’s Law of Requisite Variety (Ashby, 1968), the entrepreneurial leader cannot address just one facet of the problem as his/her efforts will impact on other connected facets in the system. Rather, he/she has to adopt a holistic approach that integrates or ensures the harmonisation of the constituent components.
- in order to produce an enterprise that will address profit, planet and people, and not just profit, the entrepreneurial leader needs to harmonise the four main approaches to entrepreneurship (economic, eco, humane and social) that previously have each been applied separately.

- many entrepreneurial leaders will need to change their mindsets by abandoning the often-quoted Friedman (1970) mantra that the responsibility of business is to satisfy its shareholders by making as much money as possible and replacing it with one that recognises the need to conform with the law and ethical custom. This involves the adoption of such non-economic goals as concern for the well-being of both people and the environment. While Professor Abouleish appreciated the need to make money his guiding principles were “*Goodness of the heart, Light of truth, Love of people*” (Papageorgiou, 2013), in line with his religious belief as a devout and practising Muslim.
- perhaps the focus of entrepreneurship should not be on the creation of stand-alone business ventures but on the creation of entrepreneurial communities in which the residents take ownership of their own destinies and are responsible for ensuring that profit, planet, and people are in harmony.

Such developments and changes will have implications for educators and those responsible for developing the entrepreneurial leaders of the future. This is being addressed by the authors (Kirby et al., 2022) as is the need to further test the model in different industry sectors, socio- economic contexts and physical environments. While the authors have produced some 70+ cases that demonstrate the concept (<https://harmonious-entrepreneurship.com/>) further research is needed, but perhaps the most urgent need is for action research. As Tilley and Young (2009, 91) have acknowledged, 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*”.

In the words of HRH, The Prince of Wales et. al (2010,3) “*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*”. This research is an attempt to address that problem and identify Schumpeter’s (1943) “*new combinations*” that will disrupt the status quo and enable entrepreneurship to impact the Sustainability Challenge.

As the ancient Confucian philosopher, Xun Zi (310BC-235BC), observed, however, “*all things under the sun will flourish when harmony prevails*”.

Appendix 1: 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 land owners 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 Tonypany 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 300,000 cubic yards (229,300 cubic metres) of waste that 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 generation. While the mines of the Welsh coalfield were closed in the 1980s the scars, both physical and mental, remain. Some 25,000 mineworkers lost their jobs as a result of the mine-closures

Notes

1. In 2007 the World Bank ranked Cairo's air the worst in the World for pollution by particulates, the most damaging to human health and well-being. Traditionally thought to be caused by the 1000 factories located in Cairo and the chronic traffic congestion created by the city's 2 million motor vehicles, research by Marey et al. (2010) has shown farming to be the main contributor. The rice farmers on the outskirts of the city burned their rice husks at night and the smoke blew into Cairo where it became trapped by temperature inversion, causing a black cloud to form over the city.
2. Vitality of the sun.
3. A system of teaching and helping people to become as mentally and physically healthy as possible.
4. Need for Achievement, Autonomy, Drive and Determination, Risk Taking and Creativity.
5. Total commitment, determination and perseverance, Drive to achieve and grow, Orientation to goals and opportunities, Taking initiative and personal responsibility, Persistence in problem solving, Veridicial awareness and a sense of humour, Seeking and using feedback, Internal locus of control, Tolerance of ambiguity, stress and uncertainty, Calculated risk-taking and sharing, Low need for status and power, Integrity and reliability, Decisiveness, urgency and patience, Dealing with failure, Team builder and hero maker, High energy, health and emotional stability, Creativity and Innovativeness, High Intelligence
6. While the world's major religions do espouse spiritual values, according to the Dalai Lama (1999) there is a distinction between religion, that is based on faith, and spirituality that is concerned with such qualities of the human spirit *"as love and compassion, patience, tolerance, forgiveness, contentment, a sense of responsibility, a sense of harmony..."*
7. The Terra Carta is a charter of ambitious and practical action intended to help the private sector accelerate its progress towards a sustainable future.

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