

FUTURE WELLBEING: SMART DESIGN OR BURNT SOCIO-ECONOMIC POLICIES

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ABSTRACT

This paper identifies and challenges the philosophies of contemporary design paradigms particularly those associated with the new ‘buzz’ term ‘smart design’; now synonymous with product design; and proposes new paradigms and future directions for design and designers and particularly design teaching within Higher Education [HE]. Design evokes debate, rhetoric and confusion, particularly when coupled to ‘smart’. One questions, what is it, which professions practise it and what should its aim and philosophy be? The United Kingdom is currently driven, relative to design, by Cox [1] and government’s drive towards a knowledge economy developed from an economic period described as ‘industrial creativity’. One questions, is this direction for the future correct? Herbert Simon, 1969, proposed ‘design is devising courses of action aimed at changing existing situations into preferred ones’. Accepting Simon’s theory integrated with Papanek’s [2] asserting that ‘design transcends all’, and that the problems facing all are of a social and economic nature i.e. mass consumption and consumerism, elements of socio-economic disruption and discourse as described by Lash and Urry ‘disorganised capitalism’ [3]; then this paper argues that ‘smart design’ and therefore ‘smart designers’ should be taking an ethical and responsible stance and in conjunction with that stance further develop the philosophies of ‘slow design’, ‘inclusive design’ and particularly when pertinent to the problems of obsolescence, e.g., mobile phones, they should cross the boundaries into ‘Manu-service design’ to solve problems that are inherently seen as socio-economic, moral and environmental. To take this new direction and change existing environs world-wide into acceptable ones, new thoughts and frame works for design curricula are required and some are proposed through this paper.

Keywords: Smart, capitalism, ethical, responsible, design paradigm, curriculum

1 INTRODUCTION

The authors have over the past twenty years argued for and proposed new thoughts and frameworks for design curricula in HE. However, always the paradigms have had design as the core; it is now proposed that the core should be that which is loosely described as design studies, a conglomerate of disparate subjects. Subjects whom the authors believe are currently treated too lightly within HE and written design curricula. HE cannot afford to offer professional practice, design studies and importantly design ethics as a supplementary, an ‘add on’ peripheral to the main theme of design teaching. It is imperative that the curriculum teaches the virtues of design, as espoused by Gui Bonsiepe, he cautioned against ‘weak ethics, something external to design; a moral overlay that is applied to professional practice but which does not enter the act of designing. Neither is the ethics we need simply something to salve a conscience’ [4]. With this in mind it is suggested as an example that ‘smart design’ should mean less design, that ‘smart designers’ means more thinking, that we should move to concentrate more on the intangibles and less on the tangibles. The ideals of slow design, inclusivity and environmentalism are often perceived as the soft side of design, treated as already mentioned, with a light touch in both higher education and commerce, yet contemporary major drivers of design appear to be the result of the insatiable appetite of Western Europe and North America for technological products that fill the very spaces of our environment, with products ranging from electronic media and games through to cars, motor-bikes and luxury home-ware. The future it is proposed requires this pattern of demand to be changed both in education and the design industry through genuine smart design and smart thinking, perceived by the authors as ethical and responsible. Semantics gives an interesting insight into the usage of the word smart, particularly in the context of

future or horizon scanning pertinent to the application of advanced technologies. In this context 'smart' is usually associated with technology and intelligence, however it is suggested not intellect, for colloquially, to be 'smart' intellectually is often considered egotistic and lacking in wisdom and forethought. Smart is also associated with pain, often the sensation of burning and is not much sought after, it is proposed that careful thought has to be given to future developments and particularly applications of so called 'smart technology' especially its effect on the economy if we are not to be found using the word in its alternative meaning; and 'smarting' from the effects and results of applying technology for its own sake. To quote John Thackara 'I am not aware of any design research that questions whether we should fill up the world with new products at all' [5].

2 ETHICS

It would appear that in the unprecedented rush to encapsulate all that is 'smart' pertinent to technology, the design profession and HE have forgotten the natural brake to design avarice, namely ethics. It is proposed that the natural introduction of students to the core subject of design studies (critical studies) is ethics, indeed it is the core of design practice from which a sense of design responsibility can be nurtured. It is suggested that only when a student is fully understanding of his or her 'design responsibilities' can they learn of design, be taught how to design and practice design. Papanek, perhaps the first ethical and political industrial designer may have been naive in his statements but thirty-eight years on they ring alarmingly true: 'as long as design concerns itself with confecting trivial 'toys for adults'', killing machines with gleaming tailfins, ... it is about time that design as we have come to know it, should cease to exist' [6]. The issue with this is the rather broad-brush approach he takes with his criticism. However, to teach students to use their design skills ethically and properly they must be made aware of their responsibilities to use contemporary smart technology and its advances 'smartly' and beneficially for all. Smart technology must be linked to responsible design; it must be seen by students to be smart, to be responsible; if we are to teach the application of advanced technology at level 6 in HE then we must teach ethics at the same advanced level, helping the students to gain responsibility. However, this is not easy when HE itself is captive to the western economy and capitalist market. The culture of the market is that individuals and groups become buyers of commodities and services, commodities that today include knowledge. Design therefore is user driven, as such Toorn suggests 'the fusion of trade, politics and communication has brought about the sophisticated one dimensional character of our symbolic environment, which is at least as menacing as the pollution of the natural environment' [7]. In this global swirling market designers, architects, engineers and educationalists all tend to acquiesce to the market and in so doing accommodate their ideals, leading to a lack of criticism of the socio-economic and technical impingements on society and the planet of their work. If one takes a genuine and rational view of the glitz of the product markets, accepting that some are responsible but many are driven in the main by the desire to engage fully with the capitalist market one is enlightened by Frampton's statement pertinent to product design and manufacture, namely; 'Is there some, fatal, inescapable paralysis that prevails, separating the increasingly smart, technological extravagance of our armaments from the wide-spread dumbness and meanness of our environment?' [8]. Effectively these three essayist designers; Papanek, Toorn and Frampton re-write ethics as design responsibility, the ability to treat clients and consumers as human, citizens of the planet and in so doing use humane intelligence when practicing design. It is proposed that whilst taking a broad view of design as underpinned by ethics then design needs to address its impact on people, their interaction with design and resultant products, the situations caused by this interaction or lack thereof and the context in which they find themselves within or without a particularly situation, in time or space; as described by Dilnot 'persons, relations, situations and context' [9]. In the sense of design particularly product and architecture then context enshrines the other three, singularly or by combination, so design is carried through, in and from the context of people, situations and interactions(relations) within the context of the environment. What students of design must also accept and understand is that which Dilnot describes as artificial, that is all we have designed, built and manufactured, not of the natural world or natural to the planet but which has changed it irrevocably and which we must change again if we are to survive in our current state. It is in this aspect that design and designers have their most important role, that of **servicing the community for mutual benefit**; ethics and understanding, leading to responsibility, responsibility for their actions and artefacts. It is argued that within the context of the artificial, man designed and made environs and that which fills them, students should be taught awareness of their responsibilities to and

for people, situations and interactions, transcribed to a re-written curriculum as; responsible in pastoral terms, responsible in economic terms and responsible in social and welfare terms. This is supported by Dilnot, stating, in 2005 ‘The demand for the ethical is, at best, a demand for a way of being responsible. But even more emphatically, the demand for the ethical is a search for lessons in how to be responsible [10]. However, although we may push for ethics in the terms of design responsibility to be at the core of the subject, we do so acknowledging that substantial argument and proven principles of good stewardship although giving evidence of the need for ethics as a general guide to follow recognising its truth may be open to debate. However, against this background we can ask students to pursue their contributions to design and the socio-economic environment in which we live with dignity and responsibility ensuring that their thinking and making, ontological and anthropological activities contribute to the well-being of society at large. It is important that they recognise their responsibilities in both elements, elements so often treated separately by the public at large. It is deemed extremely important to recognise both these elements of product design, the act of designing and the act of building, an integrated process but perceived as two separate even disparate actions by the public at large. Actions often under-rated but best described by Rose, stating ‘our testaments to physical work are so often focused on the values such work exhibits rather than on the thought it requires. It is a subtle but pervasive omission It is as though in our cultural iconography we are given the muscled arm, sleeve rolled tight against biceps, but no thought bright behind eye, no image that links hand and brain [11].

3 WANT OR NEED

Against this contemporary cultural background of over production, mass consumption and slowing economies, it is proposed that the two perceived by-words of the advanced economies are want and need; want is defined as ‘to feel a need or longing for’ whereas need is defined as ‘obliged, used to express necessity’ [12]. This paper argues the primary task of designers, teachers and students is to question whether or not society and the economy genuinely need another product, artifact etc. is there an expressed necessity or is it just a wanting, a feeling they need another product, artifact or object; for as Scotus wrote ‘any object is only identified by means of its attributes or qualities’ [13], it should be so for our designed society and environment. As a consequence this paper argues that the central theme of a design curriculum should be a broad and deep understanding of socio-economic and environmental issues i.e. design studies; not necessarily design practice in either pragmatic or academic form. Underpinned by ethical considerations the proposed content of the central theme and its integration within a design curriculum is detailed through this paper which, extends the argument for a new and refreshed curriculum from the aspect of three parallel hypotheses which require careful consideration pertinent to the definition of societies needs as opposed to wants and their resultant influences on a new curriculum. Firstly, the requirement of designers to be **responsible in pastoral terms** e.g., to control and to avoid the over-use of smart technology and the burdening result of over production and mass consumption, depleting the worlds resources and leaving for future generations problems of waste pollution and failing economies; design actions leading to less but more fruitful products. Secondly, the requirements of designers to be **responsible in economic terms** e.g., controlled use of smart technology to replace the labour force, perceived then to be ‘free cost’ labour, without recognition of the investment pre-market and sales of goods e.g., robotic manufacturing of goods; design actions leading to medical and humanitarian use. Historically problems of economy have been identified in civilisations where free labour and market forces operated in parallel with a bondage market. Thirdly, the requirement of designers to be **responsible in social terms** e.g., transferring their knowledge and products in sustainable ways to move the emerging economies in line with the advanced; design actions leading to knowledge transfer in an attempt to raise living standards. In order to design new and exciting curricula to deliver on these three aspects it was deemed necessary to re-visit the criteria for product/engineering design in HE, criteria from which new perspectives on subject matter could be explored, researched, analysed and developed. It was also deemed necessary to re-visit the messages we receive from a designed product, artifact or environment, ‘deciphering the messages which objects communicate across time-messages about peoples and places, environments and interactions, about different moments in history and about our own time as we reflect upon them’ [14]; this brought new thoughts to that which the authors were trying to achieve, brought a new dimension to the familiar term ‘reverse engineering’ and strengthened the authors’ resolve that critical analysis lay at the heart of the new curriculum. It also heightened the awareness of the authors to the

ethical and moral issues espoused by design and designers. How thought provoking would it be to introduce students to ‘Kester’s Throne’, a chair designed and built in Mozambique entirely from rifle parts, product design as an element of a programme of mass disarmament led by Bishop Dinis Sengulane, who invited artists and designers to ‘convey a message of peace by using the bits and pieces of relinquished rifles’ as a working material [15]. This one design brief, its embryonic issues, its resultant design, a chair, bringing into sharp focus for students, academic staff and designers all the elements of concern for the profession i.e. morals, ethics, mass production, advanced economies, emerging economies, lost generations, need against want, sustainability and correct choice. In direct opposition to this design of the emerging world they could critique Philippe Starck’s infamous Gun Lamp, displayed at the Milan fair in 2008 for the advanced economies. It brought unwanted publicity to the design profession but within the art and design world it drew both favourable and unfavourable comment. Mark Delaney commented ‘these products are symptomatic of design’s continuing obsession with fashion and novelty; neither particularly beautiful nor artistically insightful [16]; a view opposed by Mike Curtis ‘the controversial nature of Starck’s latest work reinforces how the design industry can provoke and stimulate the consciousness’[17]. To introduce the students to these contrasting views of product design as a baptism to a programme, whose central theme would be critical thinking i.e. analysis is not only an exciting prospect but was the starting point for the theoretical development of an ethically centred, student simulated product design course; aimed to nurture responsibility through ethical consideration of design in the context of pastoral, economic and social terms.

4 PROGRAMME BENCHMARKS

Against the background as described previously and giving particular attention to the formulated ideal of serving the community for mutual benefit through the three responsibilities of pastoral, economic and social values an audit was carried out to determine the criteria required as the foundations for the new curriculum. This in turn led to an exercise which re-visited the benchmark statements originally written to underpin the programme development based on statements derived from the Quality Assure Agency for HE [QAA]. It became apparent immediately that the authors had not given enough weighting to the more cultural, social and philosophical statements attributed to art and design; after much discussion these were re-tabulated, re-written and re-defined as;

Students require;

- Knowledge and understanding of the visual and material culture of more than a geographical region and/or a chronological period.

Design was encapsulated within five elements to be activated by the students, namely;

- define a problem and identify constraints,
- design solutions according to customer and user needs,
- use creativity and innovation in a practical context,
- ensure fitness for purpose [including operation, maintenance, reliability etc]
- adapt design to meet their new purposes or applications.

Through these activities students will develop the following;

- the capacity to be creative, an aesthetic sensibility,
- intellectual enquiry, skills in team-working,
- an appreciation of diversity, the ability to conduct research in a variety of modes,
- the quality of reflecting on one’s own learning and development,
- the capacity to work independently, determining their own future learning needs.

Through these activities students will develop the ability to;

- monitor, interpret and apply the results of analysis and modelling in order to bring about continuous improvement,
- balance and present alternative points of view held within the subjects, to use unfamiliar arguments and artefacts constructively, and to engage critically with familiar and unfamiliar established and non-established ideas,
- apply quantitative methods and computer software relevant to their engineering design and technology discipline(s), frequently within a multi-disciplinary context,
- locate artifacts within appropriate historical, intellectual, cultural or institutional context,
- apply a systems approach to engineering problems through know-how of the application of the

- relevant technologies,
- produce well-structured and relevant arguments supported by visual, textual or other evidence as appropriate,
- use the results of analysis to solve engineering design problems, apply technology and implement engineering design processes,
- engage with the concepts, values and debates that inform study and research in the subject area, including an awareness of the limited and partial nature of all historical knowledge,
- understand the need for a high level of professional and ethical conduct in design engineering [18].

It became apparent that we were asking the students to understand through their studies a knowledge and understanding of the visual and material culture of more than one geographical region and more than one chronological period, through their independent intellectual research they would have to generate an appreciation of the diversity of product design and learn to reflect on design and on their own development and learning. Through this they would begin to develop alternative points of view and to engage critically with the subject matter, nurturing their own responsibilities in an ethical manner allowing themselves to become professional in their dealings with the community at large in a manner mutually beneficial to all.

5 CONCLUSION

From researched data, analysis and evaluation as described a new curriculum was formulated based upon a core of ethically influenced design responsibilities generated from the recognised important role of serving the community for mutual benefit. Unlike the majority of programmes described in graphical format, often in educational publications this new curriculum took a circular form. The central core containing the three responsibilities of economic, social and pastoral terms, taken from the evaluation of ethical needs. The credit point rating of the modules for levels 4, 5 and 6 would remain the same; however the two modules of design studies take on a seamless approach, operating throughout the first two years of study leading to the dissertation (BA) and the thesis (BSc). The subject matter it was concluded should follow a defined time-line, namely the Great Exhibition of 1851 through to the Festival of Britain 1951, followed by the 'post-modern' period up to the contemporary as defined by the creative then the knowledge economy. Through studying the period 1851-1951 the students it is proposed would be immersed in the technical, social and economic changes brought about by the industrial revolution. The infusion of new technologies and materials and the transformation of Europe from an agricultural society to an industrial society are seen as the underpinning knowledge required for students of product design. A new economic and social order was generated between 1851 and 1914, and as MacGregor states; 'Technological innovation led to mass production of goods and growing international trade: consumer goods that had previously been luxuries, such as tea, became widely affordable to the masses. In many countries, mass movements campaigned for political and social reforms, including the right for all men and women to be able to vote' [19]. Interestingly, one of the commodities, tea, makes an extremely beguiling topic for research for product students and will certainly figure in future case studies in year design studies; for behind the British cup of tea lies the complex issues of imperialism, economics, mass production, social and ethical elements of labour and the first products of 'want' not 'need'; the 'tea set'. Studying the period 1914-1951, students become aware of the sense of the compaction of time as the globe appears smaller; even to shrink due to faster travel time and media communication that is almost instantaneous. This time period will give way to the full glitz of Product and Engineering Design in its contemporaneous sense, promoted by such global design figures as; Ives, Starke and Smith, designers who are more famous than their brands and products. These designer icons move across design discipline boundaries bringing new products to the market. However, the use of advanced 'smart' technologies and materials to bring new commodities to the global market, as described earlier does not always glean favourable results. It is important that students be aware of the results of using advanced technology, smart design, remembering design must serve the community for; 'many of these objects (particularly since the invention of plastics) have been ephemeral and disposable, which has given urgency to questions about the environment and global resources. As has been true for almost two million years, objects we have produced over the last century convey our concerns, our creativity, our aspirations, and will continue to reveal them to future generations. This applies not only to artefacts but can for example include photography and film. Interestingly, a new initiative within

the new curriculum namely an organised series of films shown throughout the students second year has been received with great enthusiasm. Shown under the groupings of; theme 1: Visions of the Future e.g., cities and concepts of the future: Metropolis, films students should also watch include: Minority Report, Logan's Run, 1984, Fahrenheit 451, Brazil and V for Vendetta; theme 2: Designers on Film e.g., designers as film makers: Charles and Ray Eames, Saul Bass, Javier Mariscal and Tom Ford, Chico and Rita; films students should also watch include: Powers of 10, Phase IV, A Single Man; and theme 3: Style and society through the decades e.g., 1950s: Birth of the Teenager: Rebellion USA and The UK; films students should also watch include: Rebel without a cause, The Wild Ones, West Side Story and Rock around the Clock. This then is the reason to make design studies the core of product design study. By study and research of earlier designed artefacts from previous socio-economic communities we can make responsible judgments on whether or not to proceed with manufacture and sale pertinent to the well-being of society, relative to the economic results of our designs for society and in so doing serve the community for mutual benefit.

REFERENCES

- [1] Cox, G: *Cox Review of Creativity in Business*; HM Treasury, 2005, page 4.
- [2] Papanek, V: *Design for the Real World*; Thames and Hudson; 1995 Second Edition; page 3.
- [3] Lash, S; Urry, J: *The End of Organised Capitalism*; Cambridge; Polity Press 2004; ISBN 0745600697; page 289.
- [4] Clark, H & Brody, D: *Design Studies a Reader*, Berg, Oxford 2009, ISBN 9781847882363, page 182: Extracted from; Badiou A, *Ethics: An Essay in Understanding Evil*; London 2001, Verso.
- [5] Thackara J. *[Un]Common Ground*, BIS Publishers, Amsterdam, 2007, ISBN 9780691660, page 29.
- [6] Clark, H & Brody, D: *Design Studies a Reader*, Berg, Oxford 2009, ISBN 9781847882363, page 180: Extracted from: Papanek, V; *Design for the real World*, Thames & Hudson, London 1974.
- [7] Clark, H & Brody, D: *Design Studies a Reader*, Berg, Oxford 2009, ISBN 9781847882363, page 180: Extracted from: van Troon, J; *Jan van Eyck Akadmie*, 1994.
- [8] Clark, H & Brody, D: *Design Studies a Reader*, Berg, Oxford 2009, ISBN 9781847882363, page 181.
- [9] Clark, H & Brody, D: *Design Studies a Reader*, Berg, Oxford 2009, ISBN 9781847882363, page 184: Extracted from: Dilnot, C: *Ethics? Design?* Arch-works Papers, 1no, 2 Ed, 2005.
- [10] Clark, H & Brody, D: *Design Studies a Reader*, Berg, Oxford 2009, ISBN 9781847882363, page 181: Extracted from: Dilnot, C: *Ethics? Design?* Arch-works Papers, 1no, 2 Ed, 2005.
- [11] Crawford, M B, *Shop Class as Soul-craft*; Penguin Books 2009, ISBN9780143117469, page 21
- [12] Collins, W: *Concise Dictionary*, William Collins and Co, Ltd, 1990, ISBN 0 00 433160-5.
- [13] Stokes, P: *Philosophy 100 Essential Thinkers*; Arcturus Publishing Limited 2004, page 53.
- [14] MacGregor, N: *A History of the World in 100 Objects*; Penguin Books, London 2010; ISBN 9781846144134; page xv.
- [15] MacGregor, N: *A History of the World in 100 Objects*; Penguin Books, London 2010; ISBN 9781846144134; page 645.
- [16] Clark, H & Brody, D: *Design Studies a Reader*, Berg, Oxford 2009, ISBN 9781847882363, page 210; Extracted from J Stones, 'Incendiary Devices', *Design Week*, 20/17 (2005), page 16-17
- [17] Clark, H & Brody, D: *Design Studies a Reader*, Berg, Oxford 2009, ISBN 9781847882363, page 210; Extracted from J Stones, 'Incendiary Devices', *Design Week*, 20/17 (2005), page 16-17.
- [18] QAA Benchmarks, *Art & Design-Mechanical Eng'*; HMSO 2010; ISBN 9781844828098/84979.
- [19] MacGregor, N: *A History of the World in 100 Objects*; Penguin Books, London 2010; ISBN 9781846144134; page 267.
- [20] MacGregor, N: *A History of the World in 100 Objects*; Penguin Books, London 2010; ISBN 9781846144134; page 267.