Brave new world - meeting the needs of society in the twenty first century, the role of design and design education

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Brave new world - meeting the needs of society in the twenty first century, the role of design and design education

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Abstract
As we are about to enter both a new century and new millennium the human race appears to be engaging in universal stock taking. Auditing the past seems to be a means of coming to terms with the future.

Design is not exempt from these phenomena. Both designers and design educationists are reflecting on the achievements of the current century and forecasting possible challenges facing the design profession as we move into the next. I and colleagues in Industrial/Product Design have done our fair share of reflection spurred on not least by an institutional review and re-validation of part of the University's design provision.

The reflection and forecasting process has been extremely beneficial and has had an impact on curriculum development. Our considerations have tried to take on board some of the sociological and technological issues which will drive design in the 21st century.

This paper is based on debate of the teaching team around the issues of
• design and ageing;
• design and disability;
• design and the 24 hour society;
• design and transportation;
• design and the environment;

Keywords: product design, social technological, context

Introduction
As we enter the new century and new millennium the human race appears to be engaging in universal stock taking. Auditing the past seems a way of trying to come to terms with the future. Design is not exempt from this phenomenon. Both designers and design educationalists have been reflecting on the achievements of the current century and forecasting possible challenges facing the design profession as we move into the next.

In preparing for institutional review and re-validation of part of our undergraduate design provision, the industrial product design teaching team at the University of Wolverhampton, have more than most, undertaken considerable reflection and forecasting on what will possibly be driving design and design education in the new century.

In 'Design in Britain 1998-99 Facts, figures and quotable quotes' recently published by the Design Council, John Thackara, Director of the Netherlands Design Institute, sees the "new drivers of innovation in design as social, market, and technological forces." (1) These forces should not only be driving design innovation but new innovations in the design curriculum so that future generations of designers are aware and equipped to meet the challenges of the twenty first century.

Throughout Europe austerity following the second world war did not give way to the
consumer society until the late 1950s and early 1960s. Since the 60s, design has tended to be driven by youth markets which were perceived as the emerging sector of society with disposable income, and a whole range of ‘lifestyle’ and ‘designer’ products has flooded the market aimed at the teens, twenties and thirties age groups. We have seen products ranging from clothes to cameras, televisions to toothbrushes, sports equipment to spectacles; in fact, very little has been exempt from the ‘designer label.’

The consumer culture that has developed around such products over the last thirty years has been fuelled by the post second world war baby boom generation for whose teen and middle ages design has catered, and who will expect design to deliver the products as they enter old age. Since the 1960s emphasis has tended to be product as opposed to user oriented. In developing useful products for the next century we will have to get under the skin of social, lifestyle and user needs. The main driving forces will be sociological and technological. High on the global sociological agenda will be an ageing society. It was discussions on this topic that started the debate on issue awareness at Wolverhampton.

It is through education that we will effect the paradigm shift in design from product to people and develop a user oriented approach based on issues affecting critical groups of product users such as the old. Our debate on design and ageing led onto other social issues. These included disability, the 24 hour society, transport, and the environment - issues we felt that would become central to the design agenda in the next century. Our current curriculum we felt needed to be beefed up to introduce the debate surrounding them early in our modular programme at level 1 so that they could be expanded in level 2 and 3 design projects. The debate is outlined below.

The Influence of Social and Technological Issues on Design

Issue 1 - Design and Ageing

The World Bank Report produced in 1994, 'Averting the Age Crisis', warned that "the world population of over 60s would treble to some 1.4 billion in the first half of the next century" (2)

In both industrialised and non industrialised nations the population is ageing. Rising life expectancy and declining fertility are producing a world populated by older rather than younger generations. In fact, the world is getting older and will never be young again. In many industrialised societies the older generation euphemistically referred to as "Golden Agers" or "Prime Lifers" will in future hold up to 75% of national discretionary income, that is, money available for purchasing non essential luxury goods such as top of the range cars, overseas holidays, second homes and financial products. (3)

It is interesting that the majority of "Prime Lifers", particularly in the industrialised societies will not only be wealthier but also have the health to enjoy their wealth. Money led markets are often the attraction for industry to develop products and the ‘Prime Life’ market will be vast. At present manufacturers seem be catering for the physical decline sector of old age by providing mobility products. Disability is inextricably linked to ageing. Although disability and physical impairment can occur at any age, the loss of physical power and the resultant lack of mobility in old age has spawned a whole range of mobility products from electric powered wheel chairs and trikes to mobility conversions to standard cars.

Roger Coleman’s ‘Design Age’ at the Royal College of Art aims to, "arrive at a better understanding of the present and future needs of older people, to interpret that information in ways that are useful to designers and industry’ and develop new methodologies in design and design education in response to the demographic and social changes taking place," (4)

At Wolverhampton, we are introducing the issues of ageing theoretically through lectures and ongoing discussions, and through project work that addresses some of the issues concerning products and older people. One such issue is the human/technology interface in products. Many domestic appliances are
simply 'over the top' when it comes to technical features.

We are all aware of multi-functional video recorders and washing machines that often have value added technical features that increase the complexity of use. Manufacturers may feel there is a selling advantage in swaying younger purchasers who may be interested in the intrinsic value endowed by such features. Most people, let alone the older generation, will probably never use all the features that such products offer, and are mystified by their complexity. De-mystification is important.

Simplicity is the key to using products and is a good starting point to introduce students to such design problems. A good maxim for both design and design education comes from an article published in the Guardian in April 1997 entitled 'Old Heads on Young Shoulders,' which looked at design in the context of an ageing society. It said,

"Design for the old and you include the young, design for the young and you exclude the old." (5)

Issue 2 - Design and Disability

As previously mentioned in Issue 1 disability has become inextricably linked to ageing although physical impairment can occur at any age. During the last decade we have started to see disability move into the centre of the political arena particularly in terms of equal opportunities and anti-discrimination.

The American and UK Disability Discrimination Acts of the 1990s have developed a new awareness of the needs of the disabled and physically impaired with legislation making public funds available to improve the lives and environment for these members of our society.

The urban environment has seen an improvement to pavements, special parking improved wheelchair access to public buildings and toilet facilities, and braille slabs and crossings for the visually impaired, but this is only the start.

Disability has become part of the awareness drive of our design curriculum at Wolverhampton which has been helped by a developing post graduate research culture in the area. PhD research is being undertaken into the design of furniture for young arthritis sufferers while at Post Doctoral level we have a joint project with the School of Health Sciences looking into the design of toys for babies born pre-term. At the undergraduate level we have already undertaken project work on swimming aids for cerebral palsy sufferers and portable physiotherapy equipment to help in the relief of cystic fibrosis. We see design and disability as a developing areas not only within our own curriculum but as one of the growing international design areas of the next millennium.

Issue 3 - The Twenty Four Hour Society

The concept of the twenty four hour society put forward in the early 1990s by Martin Moore-Ede (6) has today become a reality through advances in information technology. The development of personal communication systems, the cellular phone, the fax and E-mail means that we now live in a world that "never stops." We can now communicate easily, quickly and cheaply on a global scale that was undreamt of a quarter century ago; the "global village" is now a reality. Instant communications have spawned service industries to support the 24 hour lifestyle. We have access to our money day and night through credit cards, hole in the wall dispensers, telephone, and computer banking and to allow us the freedom to spend it we have seen the introduction of 7 days a week shopping and television and internet selling. Shopping has now become the major pastime of our consumer society.

Against the background of availability on demand at any time we have a global workplace that demands a work force on a 24 hour, 365 days a year basis. Office hours have eroded, the working week is longer and traditional career paths and job security no longer apply. Politicians inform us that a job for life is a thing of the past and that we should be considering a number of careers in a working lifetime.

We now have a student population that has to
work to support its education and are well aware of the realities and uncertainties of the job market. Within the fast changing world of the 24 hour society design has a role to play. Awareness of change is important and we feel that debate on the subject and the technologies driving them is an important part of the training of designers. It is now becoming an essential part of our new curriculum; to stimulate awareness and discussion on such issues we have introduced staff-student debating sessions.

Issue 4 - Design and Transportation
At a century old, the car more than any other product has had the most influence on twentieth century life. In industrial societies, on the one hand it has improved personal freedom and access, but, on the other, has also brought the problems of urban congestion and pollution. From a student point of view there is a glamour in car design, but we have to be realistic about the future unrestricted use of the car in its present form as personal transport and have to make students aware of the problems to be faced by the increasing use of cars and fossil fuels. We have to change the status attached to car ownership and unrestricted usage and have to start a re-education programme concerning transport and transport systems. There is no better place to start than with design students who will as professional designers be the setters of future trends. Again we are entering continual debate about transport issues.

Issue 5 - Design and the Environment
The 1990s have seen a resurgence of green issues but, as yet, these tend to be pay lip-service to environmental matters. Re-cycling bottles, clothes and newspapers may ease the conscience but does it really tackle the problem of waste in industrialised societies where waste is rampant? Consumer societies are wasteful societies.

Like the use of the motor car, environmental issues may, as the 21st century progresses, have to be enforced by legislation. At the present the problem is one of a culture change in which design has an important part to play. Long life products that are repairable and recyclable can aid the process and may help to change the throwaway culture. Green issues should be central to all design and these issues are under constant debate within our curriculum.

Conclusions
In design and design education we should be pro-active as opposed to re-active to social and technological issues. At the moment the tendency is to the latter. Student awareness of them is currently low. As we move into the next century these issues will have increased importance and will lead design innovation and development. Acknowledging, understanding debating and challenging these issues is as important a part of the design educational processes as creative development and problem solving.

Notes and References