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Globalisation on the go: implications for Design and Technology Education @ 2003
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Abstract
Whatever might be meant by globalisation, it may not be what we perceive it to be. Nor may it be beyond our influence as educators. This is not to suggest that, if it is a single linear inexorable force, the nascent field of design and technology (D & T) education is going to halt it or change its course. Rather, this paper argues that, in recognition of the fact that something called globalisation may be happening, it is worth looking at what this means for D & T education.

The paper explores the nature of globalisation, arguing that it is neither a singular homogenous phenomenon, nor is it something towards which D & T curriculum cannot contribute. However, such a contribution begs the question of the nature and quality of the curriculum we chose to offer.

By taking a critical perspective on both globalisation and on D & T curriculum, the paper sets out a variety of understandings of global forces and global alternatives and articulates a series of considerations which might be applied to an appropriate D & T education in a globalising context.

Keywords
design and technology, curriculum, globalisation, ethics, democracy

The nature of globalisation
In popular and simplistic usage the term 'globalisation' is taken to mean either the expansion of markets or the linking of the world through the internet. But such simplifications are doubly problematic. Firstly, both the markets and the communications remain a long way from the reach of much of the world’s population. Secondly, there is rather more to the picture than economics and communications.

Elliott (2003) suggests that there are optimistic or pessimistic interpretations of globalisation and the term has become something of a buzzword in recent years readily occupying the language of academia, markets, the media and daily conversations alike. He suggests that there are globalisers and anti-globalisers. The former are optimistic, upbeat and see value in the growth of multinationals and global financial markets along with a diffusion of popular (notably Western) culture. More dubious are the globalisers’ claims of benefits to democracy (presumably their idea of it) and alternatives to centralised power. They see globalisation as ‘generally beneficial and historically inevitable.’ This note of inevitability is mirrored by Ellyard’s (1998) rather bland observation that ‘the world we live in is becoming far more unified – globalised – in the way our lives are conducted and determined’ (Ellyard, 1998: 1).

For the pessimists, Elliott (2003) offers anti-globalisers – sceptical of neo-liberal zeal, who paint a gloomy sociological scenario, seeing globalisation as synonymous with Western imperialism or Americanisation with billions of people exiled into poverty and exclusion thanks to the dictates of corporate capitalism. An anti-globaliser might argue that developing countries aren’t (developing) and the free market isn’t (free).

It is important to be clear that ‘globalisation’, in its various guises, can be seen as aggressive or benign, overt or covert, welcomed or loathed, and that one’s perceptions are very much a matter of politics or place in the whole affair. While Giddens (1994) has described globalisation as ‘the intensification of world-wide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa.’ (Giddens in Galvin, 1994: 181), the question still arises of what, if any, personal or collective
control people have over events. It is necessary to take a look at globalisation from several perspectives.

Ranging perspectives
Authors like Kelly (2002) articulate the perspective of the World Bank as improving the lot of many (while acknowledging the ‘tragedy’ of the two billion people ‘...marginal to the international economy’): ‘Recent studies by the World Bank conclude that globalisation is a more decisive force for cutting rather than boosting poverty and inequality...’ (Kelly, 2002).

However, many authors voice their concerns over globalisation when seen as the expansion and affirmation of international capitalism – nothing more or less.

Inequity and poverty are stark realities for literally billions – the majority – of people across the world and there are many ways that these phenomena can be measured. Two examples are drawn from the 1998 Human Development Report from the United Nations (New Internationalist, 1999). Firstly, 20% of the world’s people who live in the highest-income countries consume 86% of the world’s resources. Secondly, the reported health expenditure figures show amounts of over US$2,700 per capita in the United States compared with US$5 or less per capita in the bottom five countries. These figures do not stand apart from technologies. In both cases the place (or otherwise) of technologies, through resource consumption, energy consumption in creation and use, obsolescence, superfluity, cultural impact or physical and psychological pollution, warrant examination.

Bryan (1994) discusses the roles of transnational corporations (TNCs) – whether large or small, known or unknown – which are about both control and strategic production taking place in more than one country. Whilst focusing his paper on communications technologies, he debates the merits of the roles TNCs play across the planet. As he, and other authors (Mumford, 1934; Rybczynski, 1985; Schumacher, 1986; Ellyard, 1998; Feenberg, 1999) point out, the phenomenon of the technology – capitalism relationship is not new.

Feenberg (1999) describes the relationships amongst labour, technique, technology and capitalism. He discusses how, historically, skilled technique was seen as a way of life and as ‘character development’ – not as vocationalism – and how such skill amounted to personal efficacy and power. However, ‘...capitalist deskilling transformed workers into mere objects of technique, no different from raw materials or machines.’ (Feenberg, 1999: 223). Similarly, Fry (1992; 1995) calls for humanism and identity in manufacturing and Warde (2002) describes the ‘smiling serfs of the new economy’.

So far as communications technologies are concerned, there is a much-heralded ‘shrinking of the world’ and access to information grows on an increasing scale. But this access remains a minority world advantage and universal access to information technologies before universal access to equitable food, water, health and shelter seems practically distant and ethically perverse.

Multiple and diverse cultures are arguably the greatest significant victims of globalisation. Personal, community and national identities are what make up cultures and if these are undermined then the loss is immeasurable. As Green (1994) points out, globalisation does not equate community when communities are reconstructed as needing consumers not members.

Another dimension of globalisation concerns ‘the death of privacy’ (ABC, 2001). Clarke (1994) has coined the term ‘dataveillance’ and, as Nixon suggests, ‘...authorities speak of the need for data regulation and people become digital shadows’ (Nixon, 1996: 30).

The extent of covert surveillance of not just individuals, but whole societies is a major concern (see e.g. Robotham, 1995; Keirl, 2001; Uaeuq, 2001) and the aggregated use of the technologies of data monitoring, video surveillance, biometrics, satellite spying, and workplace monitoring, combined with moves to licence and control the internet, amount at the very least to a massive failure to consult.

Design and the material world
Capitalism, overproduction and waste continue to increase and accelerate. The claim that ‘quality of life’ improves proportionately with such increases remains unproven. Four decades ago, Packard warned that: ‘...the nation faces the hazard of developing a healthy economy within the confines of a psychologically sick and psychologically impoverished society.’ (Packard, 1960: 293). More recently, Schumaker (2001), a clinical psychologist, talks of: ‘...capitalism's psychological dead end where life masquerades as a kaleidoscope of consumer choices...(and of)...the collective voice of mindless consumerism as it has been perfected and amplified in America’ (Schumaker, 2001: 34).

With such analyses come understandings that our relationship with the designed and made world is intimate. We cannot ‘be’ who we are without relating to the designed and manufactured world nor can our politics be separated from it (Whityl, 1993; Fry, 1995; Winner, 1995; 1999). ‘Design can now be more clearly
seen to ride the line between creation and destruction.' (Fry, 1995: 190)

Whiteley (1993) points to the overthrow of some countries’ economic systems ‘…as the ‘globalization’ of design (which…can also be described as the ‘Americanization’ of design) has taken hold’ (Whiteley, 1993: 5). He discusses the threat that is posed by globalisation as ‘anonymous standardisation’ and points to international hotel chains which deny national variety or cultural difference (Whiteley, 1993: 25-26). Thus, it can be argued, there are strong and direct links between capitalism, materialism and design for the market.

Bringing technology into focus and seeing other globalisations

Having taken an overview of globalisation what, then, can be said about technology in this situation? In essence, it is argued that whatever one’s understanding of ‘globalisation’, it is inextricably bound up with technology. As Mumford has noted ‘…although capitalism and technics must be clearly distinguished at every stage, one conditioned the other and reacted upon it.’ (Mumford, 1934: 26-27). For capitalist globalisation today, the manifestation of the technology may be material or instrumental. As products, technologies are items for sale – whether washing-up brush, burger or bomb. They fulfil the capitalist imperatives of continuous market expansion, market saturation and obsolescence, so they necessarily re-shape identities and cultures. Technologies also have a role in maintaining power and power difference through the organisation of production methods, design of communications (and surveillance) systems, product design, military systems and workplace monitoring.

To advocate ‘political technology’ as a viable construct would be anathema to those who argue technology to be ‘neutral’. While this paper cannot explore that particular issue, the premise of a non-neutral and values-rich understanding of technologies and technological practices should be evident throughout (see also, Keirl, 1998; 2000). Feenberg (1999) identifies two ‘substantive’ theories of technology and argues that the pervasive nature of technology in our lives is such that:

‘…one can draw diametrically opposed conclusions: either politics becomes another branch of technology, or technology is recognised as political. The first alternative leads straight to technocracy: public debate will be replaced by technical expertise; research rather than the uninformed opinion of the voters will identify the most efficient course of action…

In opposition to this technocratic trend, there is a grand tradition of romantic protest against mechanisation going back a century or more.’ (Feenberg, 1999: 2)

Both theories identify the non-neutral, values-rich, nature of technology. ‘Its spread is therefore not innocent…In this situation, means and ends cannot be separated. How we do things determines who and what we are. Technological development transforms what it is to be human’ (Feenberg, 1999: 2).

For the environmental case, Mumford (1934), Whiteley (1993), Singer (1995), Ellyard (1998) and Feenberg (1999) all critique the relationship between design and profit and explore the intentions behind certain design approaches and their intended ends. Both Ellyard (1998) and Mayall (1979) cite sets of design principles that put humanity and sustainable development before markets.

From an equity perspective, it can be argued that class-based and racial differences are perpetuated by control over the design, production and ownership of technologies and this is no less the case for gender relations. Whiteley (1993) offers critical feminist perspectives on design and Wajcman (1991) points to the ‘…ideology of masculinity that has (an) intimate bond with technology’ (Wajcman, 1991: 137).

Ethically, Singer (1995), Packard (1960) and Schumaker (2001) share similar positions in discussing personal and social psychological wellbeing in relation to the material world of production and what we are lead to believe are ‘consumer choices’. It would seem that an ethically defensible alternative of power and wealth-driven globalisation is quite conceivable. There already exist local, national and international communities of people with shared interests and concerns which do not align with a globalisation of profit and materialism. Such groups embrace issues such as human rights, the environment, labour, poverty, health, education and peace, and, in doing so, take an ethical approach to matters of injustice. Collectively, a global democracy is sought as a viable future and if this is to develop, then it will do so on a basis of ethical principles. In turn, the whole spectrum of issues relating to technologies will come under scrutiny.

Thus, it is argued that a proper understanding of technologies is an essence of understanding our democratic ‘being’. What is bound up here is the nature of decision making as well as the nature of the technologies. Many are the technologies with which we live but very few are the technologies that we, or our forebears, had any actual choice in accepting into
our lives. This is not a democratic practice. If an ethically based, democratic globalisation is to develop, then so will an ethical scrutiny of technologies, which, in turn, will need an appropriate education – one that centres on human needs (not wants), on peaceful co-existence and on critiquing the material world. From the perspective of technologies, what shape might such an education take?

**Knowing technology curriculum in a globalising world**

Wherever one is practising as a technology educator one can consider the interdependence of the local setting with the national. It is not difficult to see further interdependence across the planet. The connections are there and, for our students, they will be even more readily apparent and accessible in the coming years.

If the premise is taken that the desirable and ethically defensible form of managing respectfully our global interdependence (as people – the species – in harmony with other species and the planet itself) is a democratic one then we need education systems that promote and model ethically defensible democratic ways of thinking and being. Thus, curriculum design must reflect these ways and, to play its part, technology curriculum must reflect these ways also.

To talk of curriculum design in this context is much more than any narrow, prescriptive sense such as syllabus or content alone. As is clear from the bulk of the paper, ideology must be recognised as ever-present. Authors such as Apple (1979; 2001) have shown the interconnectedness of ideology and curriculum and, rightly, take a holistic approach to understanding education. As Apple puts it, ‘The school is not a passive mirror, but an active force, one that also serves to give legitimacy to economic and social forms and ideologies so intimately connected to it.’ (Apple, 1979: 42). He demonstrates how under the dominant image of globalisation ‘democracy’ takes new and perverted meaning:

‘The idea of the ‘consumer’ is crucial…For neoliberals, the world in essence is a vast supermarket. 'Consumer choice’ is the guarantor of democracy. In effect, education is seen as one more product like bread, cars, and television…Thus, democracy is turned into consumption practices…the ideal of the citizen is that of purchaser. The ideological effects of this position are momentous. Rather than democracy being a political concept, it is transformed into a wholly economic one.’

(Apple, 2001: 39)

D&T education must continue to gain strength and integrity and disavow the many misperceptions and stereotypes that surround the field. This means continuing to act locally, nationally and internationally to establish its defensible place in mainstream curriculum. It means dismantling the kinds of obstructions to a holistic understanding of the field i.e. the orthodoxies of technology: as new; as 'things'; as neutral; as hi-tech/il-tech; as applied science; as inevitable; and, as incomprehensible (Keirl, 1999). It means resisting the kinds of stakeholder claims that would reconstruct D&T in far from ethically defensible democratic ways (see e.g. Layton, 1994).

What has just been said amounts to a necessary professional politics. However, it is also necessary to recognise the roles of technologies in the dynamics of world change and to draw from this the need for technology education to reconstruct itself in dynamic ways. That is, not as passive mirror but as active force. D&T cannot be mere servant of industry – as skill provider for production output and for workplace preparation. That is hardly education.

Through the dynamics of intention and design, technologies are brought about and play their roles in shaping individuals and communities. An education in these dynamics would help confront notions of determinism and play a part in an education for empowerment. Such empowerment provides opportunities for students and citizens to engage with the very change of which they are a part. This is already a step towards a globalisation of a different type.

A democratic globalisation or a democratic society will always struggle to be an ideal in overcoming inequity and injustice. (This is perhaps the greatest design problem for humanity.) The foundation of democratic practice is an ethical one – the pursuit of the question of how we should live. If global citizens are to grapple with this question in meaningful ways, then they will very quickly come to interrogate technologies. Such interrogation dismantles the intentions and design principles that preface the bringing-into-being of technologies. It also calls for deeper existential and spiritual understandings of the purpose of designing and making – and of the roles of technologies in our lives.

Rather than technology education being primarily concerned with the transmission of identified knowledge, whether propositional or procedural, it must broaden to embrace critical knowledge and creational knowledge. Such knowledge(s) facilitate design principles and the desire to achieve change in an ethically defensible and communally desirable way.
Such a regime places the student very much at the centre of learning. For students and communities to fulfil their roles in a democratic curriculum their voice will matter as much as how they construct knowledge.

D&T education can play a powerful role in an education for democracy. Deciding what is a technological design problem can itself be an ethical question as is the question of what constitutes an 'appropriate technology'. There is no shortage of technological issues to engage with – some not new, some emergent: privacy and surveillance; overproduction; waste; obsolescence; genetic (human or otherwise) engineering; xenotransplantation; robotics; artificial intelligence; planetary degradation; psychological degradation; technological imperialism. To educate people with the tools of critique and interrogation is a useful democratic practice.

There is nothing inevitable about any one kind of globalisation or any one kind of technology. As a species we have the capacities to create and refute any form of globalisation or technology. To talk of globalisation 'on the go' can, of course, mean one of two things. Not only is something which is 'on the go', in motion, but it can also be in a state of decline. There are options and D&T education can choose an active or a passive role for its future.

References


