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Exclusion, Inclusion and the Internet

Introduction

The discussion of exclusion and the Internet links with issues in public policy and identifies contemporary forms of inequality. In terms of the Internet in the dynamics of inclusion and exclusion, the focus of the debate is often on the concept of a digital divide or divides. However, to fully appreciate the complexity that underpins a digital divide means addressing the relationship between the social materialization of the Internet and the dynamics of exclusion. In general terms, the digital divide can be understood as the differentiation between the Internet-haves and Internet-have-nots, which adds a fundamental cleavage to existing sources of inequality and social exclusion (Castells, 2001). This understanding requires an analysis that moves beyond a definition of the digital divide that focuses on those who have access to ICT and those who do not, to understanding the characteristics of participation within open societies. Digital divides are multidimensional and include the dynamics of socio-economic position, geographic location, ethnicity and language, as well as educational capacities and digital literacy. These dynamics are further complicated in the global digital divide, where lower Internet penetration in developing countries (although this can be uneven within these countries), combined with the rapid change of the Internet-based technological paradigm, requires that the less-developed countries have to outperform advanced economies just to stay where they are, thus fostering and reproducing global inequalities (ibid.). The chapter concludes that under the current social and institutional conditions of transnational-networked capitalism there is an uneven development that is putting many at risk of poverty and social exclusion.

General Context of Inclusion and Exclusion

The problem of inclusion and exclusion requires consideration of the dynamics of the restructuring of the capitalist economy, its networked

logic underpinned by ICT and trends towards post-Fordist welfare. The dynamics of transnational, informational capitalism within an ethos of neo-liberalism is interacting with social and economic life at the local, regional, national and global level (Room (ed.), 1995). Situations of exclusion are experienced at the local level, which link to regional and national economic conditions and policy, while also relating to trends in the global economy (Steinert and Pilgram (eds), 2007). Steinert (2007) suggests that innovation phases in economic cycles tend to undermine security within labour markets. The heightened competitive environment in innovation phases means that a proportion of labour is at risk of becoming excluded from the labour market – either through lack of relevant skills and attitudes or through the structural reorganization of labour. This has reverberations for the way in which individuals can participate economically in society and therefore also their capabilities to secure their well-being. The current phase of capitalism is resulting in a horizontal model of exclusionary risk because its restructuring is altering work patterns and skill-sets across the socio-economic spectrum (p. 44). A further factor in these dynamics is a relative loss of state power to protect national economies, which undermines the possible scope of national welfare policy.

Although there is a debate about the rigour of the term 'social exclusion', it does represent the experience of insecurity, marginalization and poverty in the current innovative phase of capitalism (Bryne, 1999; Young, 2000). A phenomenology of exclusion points to different dimensions such as political exclusion (via citizenship), economic exclusion (through lack of means), social exclusion (through isolation) and cultural exclusion (through deficits in education). Steinert's (2007) definition captures the dynamics of exclusion, arguing that social exclusion is a

dynamic and multi-dimensional process rather than as an all-or-nothing event and status. The process and the variety of dimensions can be broken down into an array of situations of (possible) exclusion ('sectoral exclusions') to be described in their mutual relations of positive or negative feedback. Social exclusion can thus be understood as the continuous and gradual exclusion from full participation in the social, including material as well as symbolic, resources produced, supplied and exploited in a society for making a living, organizing a life and taking part in the development of a (hopefully better) future. (Steinert, 2007, p. 5)

The dynamics of exclusion are embedded in post-Fordist relations of production and the processes of globalization (Bauman, 1998; Hutton and Giddens, 2001; Steinert, 2007). There is a lack of employment security, with actors having to be flexible to survive in the labour market (Sennett, 1998, 2001). There is need for labour with skills to work as symbolic analysts

(Robins and Webster, 1999) and as knowledge workers with appropriate skills and education to use the technology to turn information into knowledge and knowledge into action (Castells, 2001; Dutton, 2001). There are others who are on the 'outside' of these developments, who do not have the necessary skills and resources, including that of geographical mobility to compete successfully in the market (Bauman, 1998; Steinert and Pilgram, 2007). Very often, these dynamics produce geographical spaces of exclusion in the form of ghettos, run-down estates, few local services and a general lack of opportunity (Madanipour, 1998).[1]

The role of the Internet as a tool in the new economy of informational capitalism, which underpins the flexibility of networks (as an organizational form) of global capital means that it interacts in material ways with the dynamics of social and cultural life. It does so at an abstract level in economic modelling, *in situ* in the movement of capital globally, in the location of firms,[2] in the shaping of employment opportunities and in the requirements of educational ability and skill sets. The way in which the Internet is embedded in the social relations of production influences narratives of the forms it manifests in and, crucially, the characteristics of participation in society. Robins and Webster (1999) describe this relationship as a 'technoculture', in which technologies are understood as

articulating the social relations of the societies in which they are mobilized – and, of course, that must mean power relations. Within our own society, then, we need to be concerned with the way in which technologies mediate capitalist social relations. On this basis, our account has a strong political-economy orientation, critically exploring the capitalist mobilization of social and human resources, and the ways in which technologies have been implicated in this process. (Robins and Webster, 1999, p. 2)[3]

The state is a key institution bridging the economy and individuals (through citizenship), and its role is influential in managing exclusion. The role of the state in social control is integral to the management of exclusion and, thus, in facilitating a framework for participation. When post-Fordist trends in welfare are combined with lightly regulated market economies, it triggers remote forms of control that reinforce social exclusion, managed, in part, through various technologies of surveillance. The Internet as a technology in the relations of production is part of these dynamics. First, its networking logic makes it a perfect tool for post-Fordist and global production processes. Second, its use within bureaucracies and by the state means it can be used to as a tool of surveillance over the populace. Baggulay (1994) draws these aspects together to state that advanced nations are grouped by the ways their traditional social welfare policies are constructed and how these influence employment and social structure. He draws on Esping

Andersen's (1990) term 'regime' to illustrate that the relation between the state and the economy is systematically woven from a complex of legal and organizational features. The way in which situations of exclusion emerge and are managed is, therefore, a result of how the economy and the state interact to produce either opportunities for participation in open societies or fosters increasing levels of surveillance in society.

In this context Steinert and Pilgram (eds, 2007) argue that, rather than discussing 'exclusion', the focus should be on 'participation'. They posit that individuals as members of social formations have differential access to resources. The levels of access and the quality of resources are key to enabling individuals and groups to participate in the life of society (Pelikan et al, 2007, p. 256). The question therefore involves ensuring that individuals and groups have access to the relevant resources to enable them to participate. When the Internet is seen as a resource then it can be seen as part of a virtuous circle, where those with access to (fast) Internet, good education and socio-economic background are in good positions to take advantage of economic development. However, those who lack access to any of these resources are at a disadvantage and at risk of exclusion. The allocation of resources is related to positions of power, with those with the least resources having less power in determining their futures, securities and freedoms to participate. Theories of the way power operates in society vary (Lukes, 2005) from ideas regarding oppression (c.f. Freire, 2000), hegemony (c.f. Gramsci, 1971) and technologies of power and discipline (c.f. Foucault, 1977); however, with regard to the Internet there are two main dimensions of power and exclusion. First, access to the Internet as it materializes in the relations of production provides the economic opportunity to participate in the labour market and economy and thus for individuals to have some power over their life chances. Second, the Internet gives states and commercial organizations the potential to control individuals through the information they can electronically gather about them. Any lack of transparency in the workings of the state and the commercial sector is a form of power that can either be used to incorporate or exclude. In this context individuals need access to the data held on them and the skills, education and power to protect their rights and identity (with the state having the responsibility to ensure freedoms are maintained through proper legislation). Given the ways in which the Internet is becoming embedded in the relations of production, in working life, in public policy and in everyday life (see Chapters 5, 6 and 8), it becomes a resource for participation – social, economic, political and cultural. This does not, however, reduce exclusion merely to access to the Internet, rather Internet-related resources become one aspect embedded within the multidimensionality of exclusion.

This argument enriches debates on the digital divide, which can reduce complex issues of exclusion to divides in digital capacities of various kinds,

rather than tracing the social relations of exclusionary situations and the role of the Internet within those relations. It starts to elucidate what an individual or group is excluded *from*, and what resources are needed for him/her and/or groups to participate. The meaningfulness of what one is excluded from and included in is understood through culture. This is significant across the dimensions of social life because the character of inequality varies across cultures, as does the meaningfulness of technologies (Wyatt et al, 2000). Therefore, understanding the digital divide means addressing the relations of production which underpin participation in social and cultural life (ibid.).[4] By understanding the Internet as comprising socio-cultural forms one can start to understand the dynamics of exclusion. This is because these forms represent *what* people are excluded from in terms of social and cultural capital and *how* they are excluded by not being able to participate in socio-cultural forms such as not being connected in networked individualism. Therefore, one can readdress digital divides through the lens of participation and so address the constraints on participation, thus making the link between exclusions and socio-economic trends within types of information society developments.

Exclusion and Digital Divides: The Global Dimension

Any analysis of the character and significance of digital divide(s) requires placing its concerns within broader debates about the changes and continuities of an informational and intermediated society. The diffusion of the Internet is uneven across societies and within specific societies. To assess the significance of exclusion from, and inclusion in, Internet-based networks means considering the significance of Internet-related activity (Wyatt et al, 2000). Castells (2001) argues that 'the centrality of the Internet in many areas of social, economic and political activity is tantamount to marginality for those without, or with only limited, access to the Internet, as well as for those unable to use it effectively' (p. 247). From this view, the digital divide is

> [t]he differentiation between Internet-haves and have-nots [that] adds a fundamental cleavage to existing sources of inequality and social exclusion in a complex interaction that appears to increase the gap between the promise of the information age and its bleak reality for many people around the world. (ibid.)

Nonetheless, Castells questions if it really is the case that people and countries are excluded by being disconnected from Internet-based networks. He argues that it is the character of social relations of the connection to

the Internet-based networks that produces the inequality (ibid.). Part of the analysis of the global digital divide, therefore, requires addressing the ways in which connections to global networks produce situations of dependency on more powerful economies and cultures by less-developed economies. This includes addressing how this reduces the possibilities and abilities of those countries with less-developed economies to generate their own material well-being and cultural identity (ibid.). To a degree, this follows an underdevelopment of development argument, in which less-developed countries are locked into dependency with wealthy nations (Frank, 1966). The diffusion of the Internet has been uneven across the globe and has followed these histories, with Westernized advanced economies far out-reaching less-developed nations in terms of access, infrastructure and Internet-based knowledge. For example, in 2000 there were 378 million Internet users, which is roughly 6.2% of the world's population. When this figure is broken down by country, the divides between global regions becomes apparent: North America's share is 43%; Western Europe's 24%; Asia including Japan has a 21% share. Compare this to Latin America's share of 4%; Eastern Europe's 4.7%; the Middle East a mere 1.3% share and Africa's 0.6% share (mostly South Africa) (Castells, 2001).

Locked into histories of dependencies, from colonialism through imperialism to the current politics of globalization, the digital divide question involves considering what are the conditions that define levels of connectivity to Internet-based networks to produce either better opportunities or, conversely, greater inequality. Castells argues that 'under current social and institutional conditions... the new techno economic system seems to induce uneven development, simultaneously increasing wealth and poverty, productivity and social exclusion, with its effects being differentially distributed in various areas of the world and in various social groups' (p. 265). The social unevenness of the development process is linked to the networking logic and global reach of the transnational informational economy, facilitated by the Internet, and which enables companies to network and be flexible in a global market. In this context, education, information and science and technology become critical sources for value creation in an Internet-based economy. These resources are unequally distributed across the globe with capacity concentrated in the advanced economies. Economies, which due to their historical past of capital exploitation and scientific and technological capability, have the intellectual property to take advantage of the current economic and technological paradigm. However, countries and regions without this type of legacy lack the capacity to compete in a fast-moving global market. A further risk factor that hampers less developed countries is that the development of Internet-based connections in the global economy is vulnerable to global financial flows. This leaves them vulnerable to the inbuilt crisis of capitalism. In the less-developed

countries when these crises occur there are only limited, and often inadequate, resources for coping. This is because these countries can only provide weak state support for people and their poor economies leave little flexibility to counter the ravages of recession. These conditions put people at risk of exclusion (Wessels and Miedema, 2007) and without adequate resource to devise coping strategies for exclusion that are at risk of further exclusion by falling back on the informal economy (Castells, 2001).

In more specific terms, the speed of change in the ICT technological paradigm means that the later-developing countries have to outperform advanced economies just to stay where they are, otherwise they will get left even further behind (ibid.). Given the existing gap between them, it is extremely difficult for less-developed countries to outperform the leading nations and therefore get ahead of them. To compete, countries need to be able to respond efficiently to the movement of global capital, which requires an up-to-date communications infrastructure. The outdated communications systems of less-developed countries put them at a disadvantage and it is a disadvantage that is not quickly remedied because it takes time to build an ICT infrastructure. Another factor is that Internet service providers tend to be dependent on United States or European Internet backbones, which increases cost and complexity for those in developing countries, as well as creating problems in the design and maintenance of the network (ibid.).

These types of issues are reflected in the geography of the Internet. In mapping Internet domains at the global level, Zook (2001a) shows that Internet content providers are concentrated in a few large metropolitan areas in the developed world. For example, London has more domains than the whole of Africa. Another consequence of this concentration is that this reinforces the language of the Internet as being English, generating patterns of inclusion and exclusion through language. It also means that large metropolitan centres have more influence over the form and content of Web-based traffic, accessibility and intuitive 'look and feel' of the interface and its usability. The geographic logic of the Internet is producing nodes in a global network that links key economic centres across the world. This is resulting in the establishment of key urban centres for globalized activities in which higher-educated social groups are being included in the Internet-based global networks. It is leaving those in the peripheral regions and places which lack ICT infrastructure as well as production and consumption resources outside of the global economic network, in effect 'switching people off' (Castells, 2001, p. 264).

These dynamics of exclusion in the networked logic of Internet-based capitalism is undermining agriculture and is resulting in a rural exodus (especially in Asia). There are high levels of migration to overcrowded metropolitan areas – the global nodes of the networked economy (ibid.). Exacerbating these dynamics is the fact that networked globalization limits

governments' capabilities to act, because they are increasingly constrained by global flows of capital and information, which weaken their power in economic policy and generates defensive strategies to survive globalization. The logic of global capitalism and its consequences means that global digital divide permeates and penetrates national and regional economies and societies and global nodes; thus generating risks of exclusion in regions and global nodes. Concretely, this is seen in the in way in which neo-liberal conditions with flexible work patterns creates labour that is individualized and workers are left unprotected. This creates a new social cleavage between a few protected workers and mass of unorganized workers who form a casualized workforce (ibid). Casualized workers are part of a reserve army of labour, which means they can be used by the economy in times of growth and discarded in times of recession. This dynamic affects global nodes and world regions, and although there is a particularity to each context, there is a risk across all societies that economic crisis can lead to a break down of regulations in which the social contract becomes challenged. The global dynamics of the capitalist economy means that governments are subjected to pressures from above and below and may suffer a crisis of legitimacy in the eyes of their citizens. There is a risk in some extreme cases of a crisis of legitimacy leading to political disintegration (ibid.).

The dynamics of global digital divide materialize at local, regional, national as well as global levels, affecting different individuals and groups. In local contexts it interacts with existing conditions of inequality to produce situations of exclusion. The specific characteristics of the digital divide in situations of exclusion involve a social divide between the 'information-rich' and 'information poor' and the democratic divide between those who use and those who not use digital resources to participate in public life (Norris, 2000). These dimensions interact with local conditions in particular ways in the context of regional and national frameworks. A phenomenology of exclusion that incorporates ideas of a digital divide therefore needs to unpack the meaning the forms the digital divide can take by addressing several dimensions, such as access, skills, knowledge and people's capacity to engage in the knowledge economy as well as in their political and socio-cultural environments.

Access and Knowledge

A straightforward analysis of a digital divide might focus on the issue of inequality of access to the Internet—however, access alone does not address the way in which Internet-related activity interacts with the dynamics of exclusion. Other factors include the acquisition of skills and knowledge to work with ICT and participate in socio-economic, political and cultural

activities. Nonetheless, access is a prerequisite for overcoming inequality in contemporary society whose dominant functions and social groups are increasingly organized around the Internet.

Access varies across countries and within them. For instance, in the United States (an advanced economy and early adopter) in 2005, 68% of American adults had access to the Internet. However, within this figure there are inequalities in access and in levels of use in America. The inequalities are related to income, education, age and ethnicity. These inequalities are seen in the following figures of gradations of use:

• 26% of Americans aged 65 and older go online, compared with 67% of those aged 50–64, 80% of those aged 30–49, and 84% of those aged 18–29.
• 57% of African-Americans go online, compared with 70% of whites.
• 29% of those who have not graduated from high school have access, compared to 61% of high school graduates and 89% of college graduates.
• 60% of American adults who do not have a child living at home go online, compared with 83% of parents of minor children. (Fox, 2005, p. 2)

Social groups less likely to have access are those with disabilities and non-English speakers (ibid.). In 2002, only 38% of Americans living with disabilities had access to the Internet (Fox, 2005, citing 2002 Pew Internet & American Life Project survey). US Census data shows that access to the Internet for Hispanics (age three years and older) in 2003 was only 37%, compared to Internet access for 65% of non-Hispanic whites (age three years and older) (US Department of Commerce, September 2004). The gender divide has, in most cases, disappeared with men and women accessing ICT in equal measure across groups. Although most gaps in Internet access are closing, the exception is the ethnicity gap – certainly figures from the United States show how racial inequality continues and is at risk of being reproduced in the age of the Internet (Castells, 2001).

The emerging picture of use of Web 2.0 and mobile applications is complex and indicates the ways in which socio-economic position, education, age, gender and ethnicity are interacting to produce differences in the quality of ICT access and use. Addressing Web 2.0, mobile devices and wireless technologies as well as user-generated content, Horrigan (2007) constructed a typology of ICT users. His ten distinct groups[5] form three main categories of users are as follows: elite users (31% of American adults); middle-of-the-road tech users (20% of above); and few tech assets (49%). The demographics of these groups in part reinforce some of the patterns of access and use, but they also cut across groups. For example, 'omnivores'[6] who are extensive and informed users, form 8% of the population. They are young (median age is 28 years), ethnically diverse and mostly male (70%), 64% are white, 11% are black and 18% of this group is

English-speaking Hispanics (ibid.). Forty-two per cent are students who have access to high-speed and wireless Internet connections at university. Just below this group in the elite user category are the connectors,[7] who are 7% of the population, median age of 38 with a similar ethnic profile. However, unlike the above group, most of these users (55%) are women who are, however, above average in educational attainment and income (ibid.). In the 'middle-of-the-road' category, the 'mobile centrics'[8] include a relatively sizable percentage of African Americans (21%) and Hispanics (14%). Within the 'few tech assets' group, the 'off-the-network group' have a median age of 64 and lowest levels of household income, and are more likely to be women (57%). This group is more ethnically diverse than some of the other groups, with an 18% proportion of African Americans (ibid.).

These figures suggest that inequalities based on income, education and ethnicity are still influential in shaping the quality of access and use of the Internet across a range of platforms and devices. Another key aspect of ensuring access, and the quality of that access, is the widespread availability of high-speed broadband. Although some rural areas in the United States are not fully connected to broadband provision, that gap is closing – in 2005, 24% of rural Americans had high-speed connections at home compared to 39% of suburban dwellers (Horrigan, 2006). Together, these factors suggest that access is widening but still needs to improve in terms of reach and quality. In relation to participation, elite users have high levels of the required skills, education and access to Internet-based technology to engage in knowledge generating communication across economic, social, political and cultural domains. The levels identified by Horrigan (2006) indicate that although many people are 'connected' in one form or another, distinctions are emerging which suggest that the quality of that 'connectedness' is varied between those with high quality access and those with lower quality or no access. The quality of access is a factor in people's ability to participate in economic and social life; therefore differentials in quality of access are part of inequality in a digital age.

Similar profiles of access and use exist in Europe but research shows that take-up of the Internet in Europe is differentiated with overall lower levels of use than in the United States (European Commission, DG Information Society and Media, 2007). The European Commission's (EC) interest in developing a competitive European ICT sector and a vibrant European information economy produces a series of ICT policy initiatives that in overall terms aim to mobilize a European Information Society' (Mansell and Steinmuller, 2000; Wessels, 2009). The EC identifies that there is a risk of producing a society divided by the Internet 'haves' and 'have nots' (Bangemann Report, 1994) and argues that policy interventions are needed to overcome digital exclusions (ibid.). The 2006 Riga Ministerial Declaration[10] set policy targets for the EU to achieve 'e-inclusion'. E-inclusion is defined as 'both inclusive

Information and Communication Technologies (ICT) and the use of ICT to achieve wider inclusion objectives and policies aiming at both reducing gaps in ICT and promoting the use of ICT to overcome exclusion' (Riga Dashboard Study, 2007, p. 3). The rationale underpinning this aim is that ICT can drive growth and employment, improve the quality of life of Europeans and foster social participation (ibid.).

The Riga Ministerial Declaration notes that 57% of individuals living in the EU do not regularly use ICT and that this gap in usage means many Europeans are not gaining any benefits from ICT (Riga Ministerial Declaration, 2006, p. 1). Divisions in ICT usage are clearly seen in relation to age, educational levels and employment status. For example,

• 10% of people over 65 use the Internet, compared to 68% of those aged 16–24.
• 24% of people with low education use the Internet, compared to 73% of those with high education.
• 32% of unemployed people use the Internet compared to 54% of employed people.
• In relation to accessibility levels to ICT for those with disability (15% of the EU population), only 3% of public websites complied with the minimum Web accessibility standards. (Riga Ministerial Declaration, 2006, p 1)

These statistics show how levels of ICT usage can link to situations of exclusion, such as unemployment and lack of opportunities due to factors like low education, disability and ageing. The Riga Dashboard (2007) study also identifies regional differences in trends of social exclusion and low ICT usage. One example is the context of de-industrialization in South Yorkshire (UK) where access to ICT is low which combines with high levels of unemployment and low levels of educational attainment to produce situations of exclusion (Wessels, 2008b, p. 2). Deviations in gaps in Internet usage are shaped through

• Age: with 73% of those aged 16–24 using the Internet compared to only 10% of those aged over 64.
• Level of education: with 77% of people with high education using the Internet compared to only 25% of those with low education level.
• Employment status: with only 38% of unemployed and 17% of economically inactive people using the Internet compared to 60% of those employed and 84% of students. (Riga Dashboard, 2007, p. 4)

A further dimension of differential take-up is geographical divides resulting from a lack of broadband penetration in some regions. This also has a rural–urban dimension in that broadband provision in rural areas has lagged behind urban provision. However, in 2006, broadband coverage reached 89% of the EU population. The lack of digital literacy is also

identified as a barrier to e-inclusion, addressing a lack of Internet, computing and general literacy skills. Groups at risk include the unemployed, immigrants, people with low educational levels, people with disabilities, the elderly and marginalized young people (p. 5).

Language is a particular issue in relation to exclusion and the Internet because the language of the Internet is English – 87% of global websites use only English (Castells, 2001). In Europe there is a diversity of cultures and many languages are spoken. In the United States, the issue of language is particularly relevant to Hispanics and African Americans whose first language is not English. In analysing Internet access generally, and also in relation to language and Internet access, one needs to consider what use and purpose the Internet has for different groups. Therefore to understand the way in which the Internet and its language, English, interacts with different language-speaking groups requires addressing their broader social condition. In general terms, ethnic minorities use the Internet for practical purposes (Silverstone, 2005). They use it to search for information, support and advice. However, for those whose first language is not English, the predominantly English websites restrict the benefits of the Internet for them and may feed into exclusionary dynamics of ethnicity. A similar issue arises with the situation of immigrants, who often need to access information in their new host country before knowing its language and the Internet is therefore of no use to them if they cannot read English. There is, however, some evidence of the growth of bi-lingual websites, especially within Europe (ibid.).

The lack of access to the Internet in the dynamics of exclusion goes beyond access to a concept of a knowledge gap (Castells, 2001). This gap is important because, in a knowledge economy and information society, it is the capacity to generate knowledge that enables people to engage in social and economic life. This particular online communicative knowledge-ability is also influential for generating participation in political and cultural life because one characteristic of knowledge in an information age is the capacity to create knowledge from a range of sources and to be innovative in developing forms of communication and networking (social and technological). This means that education and life-long learning become essential resources for work achievement and personal development (ibid.). Access to innovative schooling, university and ongoing development is a key resource for inclusion in contemporary society. It is not just the extension of education over the life course but also concerns the quality and character of education. Castells points out that schools are differentiated territorially and institutionally through class and race (including the divide between public and private schooling). Better-resourced schools can invest more heavily in ICT and teacher training as well as having the advantage of pupils equipped with the cultural capital to engage in education. In contrast, schools in poorer areas have less resource in real terms

to meet the intensive demands of overcoming poverty and in consequence, they have less to invest in ICT-related activities. Schools in more deprived areas often have pupils with lower cultural capital than pupils from more affluent areas, which makes teaching more difficult and limits innovation within schools, whether in ICT-related areas or the arts and sciences.

This aspect is significant in the information age because forms of pedagogy need to change to produce pupils who can work in an environment that requires creativity and versatility. Pedagogy has moved towards focusing on opening minds and fostering creativity, which is very different from the industrial model of learning facts and prescribed skills. Schools with more resource and pupils with high levels of cultural capital often have a more open and creative approach to teaching. The demands on schools with less resource and with pupils with greater needs often means they have to operate in more authoritarian way due to these conditions (ibid.). In these contexts, responsibility for supplementing their child's education gets passed onto parents, which is precisely where the issue of home background and educational achievement is played out. One of the consequences of this is that children from poorer backgrounds fall farther behind in their education than their more affluent peers, which puts them at a disadvantage in further education and in the labour market. This severely limits these young people's capacity to evade situations of exclusion and reproduces situations of poverty.

The discussion in this section of the chapter shows how access and the quality of access are important in the dynamics of inclusion and exclusion. The inequalities of access place restrictions on people being able to participate in the societies in which they live. Thus good quality access in the United States is important due to its generally high levels of use and for many it is a tool that facilitates social participation. In Europe access is important because the EC is seeking to develop economies based on ICT and to use it as a tool for participation. In developing countries the focus is on building a fast broadband infrastructure, improving education and digital literacy, facilitating commercial activity as well as addressing poverty. In broad terms to ensure inclusion in digital related communication and work means addressing the knowledge gap so that everyone has the skills and education to be able to use ICT in a productive and fulfilling way and so participate openly in the society in which they live.

Case Studies: The Dynamics of Inclusion and Internet Socio-Cultural Forms

Access to ICT and levels of knowledge in using it within networked digital environments interact in a multidimensional way with situations

of exclusion. Combinations of factors configure in particular ways to form conditions for inclusion and participation or, alternately, they configure to induce situations that are exclusionary at varying levels. The following case studies illustrate just some of the ways in which various factors combine in different situations.

In London, the divide is not simply between the Internet 'haves' and 'have-nots'. Rather, divides exist between high, medium and low users, with disadvantaged users always having to play 'catch up' with higher level users in the city. These divides are linked to household connectivity patterns – in 2001, 45% of London households were connected to the Internet, a higher percentage than other regions in the United Kingdom. However, there is a great deal of variation in levels of connectivity within London, for example, the least connected London boroughs of Barking & Dagenham, Hackney and Islington have less than 25% of households connected to the Internet, whereas the three most connected boroughs of Kingston upon Thames, Richmond upon Thames and the City of London have more than 50% connectivity. This pattern mirrors existing inequalities, as these two clusters of boroughs represent the poorest and richest boroughs respectively.

Another layer in the divide are the barriers to adoption and use amongst the more socially excluded groups that correlate with socio-economic factors, such as unemployment, poorer housing and local facilities and low levels of education. For example, ICT use by socially excluded groups living on council estates where the level of unemployment is high is only 16% of the estate population (Association of London Government (ALG), 2002). The ALG argue that the most important factors for enhancing ICT adoption is not access *per se*, but training coupled with a reduction in access costs. ALG researchers question the assumption that the Internet has the potential to counter exclusion by considering the way in which the Internet may actually improve people's life chances. Once this question is asked then the focus becomes a more insightful one of – how can the Internet be shaped to counter exclusion? In other words, what would make the Internet more valuable for groups at risk of exclusion? From this perspective, initiatives need to explore how socially excluded groups could benefit from ICT and then ensure that content and services are designed to meet those needs. This approach is one in which development takes a user focus rather than a service provider focus.

Overall, the ALG research shows that a holistic policy approach is needed to counter the divisions in Internet access and use. ALG recommends that policy should address levels of awareness, access to the Internet, the provision of skills and training and the use and impact of Internet related activity for local communities. From a development point of view this means creating leadership in e-domains with the knowledge to develop strategy for digital

inclusion, to foster research and resources and people and partnerships to address the complexity of the issue of digital divides within the dynamics of inclusion and exclusion. The London example shows how aspects of digital divides interact with situations of exclusion in multidimensional ways.

The German context provides a different slant on the dynamics of inclusion and exclusion, in that data from there highlights inequalities in private access to the Internet and sheds light on whether Internet usage discourages other leisure activities which form part of an individual's social capital within a specific society (Wagner et al., 2002). In Germany, the private use of the Internet is spread across all social strata. There are, however, substantial differences in levels and quality of privately accessible ICT access and knowledge that relate to different levels of income and education. Thus when higher levels of education are correlated with higher incomes, wealthy parents are more likely to provide a computer for their children than parents from lower-income families. In particular, single-parent households, with mainly low incomes, have less access to the Internet and children in this category do not have private access to computers at home (ibid.).

In countering these private divisions in Internet usage, all German schools have Internet access for all children. The quality of this access extends beyond the supply of hardware and software to ensuring that teachers are well trained in skills for Web-based learning. The rationale behind this policy is the belief that a lack of computer skills puts low-skilled people who are already in the workplace at a disadvantage and that it also forms barriers that stop low-skilled people such as young people with only the minimum school-leaving certificate from getting into the labour market. From within the German policy-making community and in popular discourse, German people see 'getting computer-trained' as vital before engaging with the job market (ibid.).

In relation to social capital and leisure time, Wagner et al. found that teenagers who use the Internet do not do so at the expense of other leisure activities such as reading and playing sport. In fact, young people who use the Internet are less likely just to 'hang around' and 'do nothing', with many using the Internet to organize other cultural activities as well as for educational and networking purposes. The Internet is therefore seen as contributing to a young person's social and cultural capital. In the German context the use of the Internet is viewed positively in that it facilitates participation in social and economic life. In Germany, policy seeks to address exclusion in employment terms by providing training and education in ICT skills. However, policy does not *directly* address inequalities based on household incomes. This is despite the fact that use of the Internet is seen in Germany as part of a person's social capital which enables him/her to participate in social and cultural life.

Another context of digital inequalities is found in the positions of low-skilled migrants, which are exclusionary across many dimensions. The situations of migrants tend to be exclusionary because they often have low-paid casual jobs, they lack access to state-provided social services and either have to build ties, or only have weak ties, with networks of support in their host country (Steinert and Pilgram, 2007; Wessels et al., 2007; Karazman-Morawetz and Ronneling, 2007). A further dimension of the migrant experience, and that of minorities, is the loss of everyday use of their own language and engagement in culture. In the first instance, being 'connected' has a different meaning. In the first instance, migrants seek access to basic information that will help them to settle into a new country. Second, they seek to find ways to connect to their relatives and friends from the places left behind, which in some cases form diasporic communities. Very often, accessing local information is hampered by a lack of online access including access to online information in their mother tongue. In response to this, migrants and minorities construct a media space from national, local and transnational media, and their use and appropriation of media is complex and layered (Silverstone, 2005). Within these contexts, the local is of primary importance; for example, access to media and communication for minorities in cities is through neighbourhood phones, Internet or video hire centres, Internet cafés and local authority centres. These sites are important as they provide access to media and communication systems for those who otherwise may not have the resources to obtain individualized and privatized access. Although some sites may generate specific user groups based on ethnicity due to their location within migration patterns, they nonetheless form open and inclusive sites of communication that can be appropriated by locally placed and transient communities (pp. 90–95). Thus, the Internet is part of a configuration of media technologies that migrant groups can appropriate to construct connectedness in ways that are meaningful and useful to them.

Another area of work is in the developing countries, which in some cases also address the dimension of women and exclusion. For instance, in Zambia the problem of gender inequalities, inequities and the empowerment of women is a concern. Many of the women there are poor, do not have access to education and are illiterate. This leads to low levels of awareness about issues that affect them and their development. They also suffer many injustices and have many of their rights violated. Although there are many women's organizations working in the country they tend to be fragmented because they cannot share information, knowledge and experience easily. Women in Zambia tend to be the heads of households holding responsibility for children, household expenditure and other essential livelihood activities. However, they lack the opportunities to generate or

receive income that curtails their ability to overcome poverty and to sustain their families.

The Zambia Association of Research and Development (ZARD) is a non-governmental organization that seeks to support and empower women in Zambia. ZARD identified the issue that sharing information and knowledge was a barrier in the empowerment of women. They developed the programme 'Women's Information for Development Network' (WIDNet, launched in 2007). WIDNet is an Internet portal for information on the status of women and it aims to promote the use of ICT4D (ICT for development) among women. The project seeks to empower women from the informal sector by providing them with information and contacts with which to improve their livelihoods. It raises awareness of women's issues amongst the women themselves and enables them to share information. This has invigorated collective action involving the Zambia's women's movement, civil society organizations, government departments, the media, learning institutions and communities as well parliamentarians. The programme has developed a strong strategic partnership that enables it to lobby for national reform through engaging with parliament, and research and publishing to enhance capacity and awareness. Some of the barriers to participation are digital literacy and basic literacy amongst the women. To address this issue WIDNet has IT literacy training for women, which included learning ICT skills to access new knowledge and educational material as well as seeking job opportunities, business contacts and further training. The training, support and advocacy combined with access to information are proving to be successful in enabling women to participate in local economies and in lobbying for improved health and social care. This programme is providing a support for women from poorer backgrounds to participate in social and economic life and it fits with Zambia's development strategy of knowledge society by 2030 (Zambia Information and Communication Technology Policy (2007), launched under the theme of 'ICT-For accelerated wealth and job creation').

Another dimension to inclusion is in relation to rural areas in developing countries. Many of these areas experience a rural exodus and those who remain often live in conditions of poverty. Developing and sustaining a good rural economy is part of development strategy. Although in some parts of rural India e-agriculture is helping farmers there are rural areas where there are high levels of poverty. One area is in the North East of India, called Arunachal Pradesh. The situation of the rural tribal farmers is that of low and uncertain agricultural productivity and frequent natural disasters. The region is remote, its terrain is difficult to farm and there is a lack of farm workers. All these combine to hinder socio-economic development in the region. A project funded by Technology Information

Facilitation Programme (TIFP) called e-Arik seeks to examine the application of ICT in agricultural services and any socio-economic outcomes among rural tribal communities. From research to ascertain the information needs of the farmers the project developed a single window system for information using computers, phone, radio and television. The single window service provides expert consultation on agricultural production, protection and marketing through the portal. This service supported by field visits of farm scientists is helping to improve the management of crop pests, as well as diseases and nutritional deficiencies in crop production. Regular training and ICT awareness lectures support the development of ICT in agriculture alongside farmer-to-farmer communication, local leadership and self-help approaches. The village advisory committee regularly reviews the progress of the project. The early experience of the e-Arik project shows improvements in farm technology dissemination, in digital literacy and e-awareness. The access to information and expertise within village learning is supporting and improving agricultural productivity in this area that may in the longer term support development and improve standards of living there.

These examples of a range of exclusionary situations help to elucidate the ways in which different people experience varying levels of access to the Internet. The case studies demonstrate that the Internet as a technology, or simply access to it, is insufficient in overcoming the dynamics of exclusion because skills and knowledge are important in utilizing the benefits of Internet connection. Furthermore, these connections need to be located within social and economic opportunities that enable people to participate in social life. However, once the Internet is understood as a socio-cultural form then the links between the dynamics of inclusion/exclusion, information and communication tools and ways of life can be elucidated (Wessels, 2000b). One example is the case of community telematics developed in the East End of London (UK). Its 'relations of production' is based on local government, business and voluntary organizations. The narratives of the form are ones of participation, creativity and diversity and it fosters innovative and inclusive forms of participation. In this instance, the social shaping of the Internet as a telematics cultural form is informed by the needs and desires of the East End of London's multicultural population. Very often the richness of the language and culture of the area's people fails to reach its potential due to a severe lack of material and symbolic resource. Given this situation, the developers and users of community telematics shape it through a range of digital, social and cultural resource centres and networks. Through these networks and resources they create community interactive digital television and user-generated content, online storytelling, ethnic language and information services, local advice and service centres, political fora and blogs and a vibrant new media sector (Harrison

and Wessels, 2005). These cultural forms generate participation and inclusion in social life – in economic, political and cultural terms to counter exclusion.

A similar process can also be seen in the ex-coalfield areas of South Yorkshire. The dynamics of exclusion include de-industrialization. The distinctiveness of ways of life is based on culture built around coal mining (Gilbert et al., 1992; Warwick and Littlejohn, 1992). It is also a predominantly a white-working-class culture. The profile of the population indicates that there are risks of exclusion interacting with a digital divide, such as an ageing population, low levels of education, high levels of unemployment and a significant number of people with disabilities (Wessels, 2008b). The way in which the Internet is being shaped in this context is through a regional public sector e-forum. The forum links production of e-services with narratives and strategies for inclusion in relation to the ways in which local people participate in education, employment and cultural and everyday life (ibid.). This is resulting in diverse forms of communication and services such as an e-campus and Digital Media Centre, local interactive digital television, young people's e-fora and a wide range of online services via e@syconnects (which joins up services and uses various digital platforms for access and communications). Nonetheless, the e-forum recognizes that it needs to move beyond these forms because, as the ICT Director says

The technology exists. The services are online. The community vehicles are in place. The missing element is people. Rather than introducing new 'gizmos,' we believe the real digital challenge is to empower people to shape their own lives. (in Wessels, 2008b, p. 6)

This vision is resulting in the development of digital outreach teams and a digital directory that aims to work with local people of all ages, with local business and social and cultural centres across the region. The goal is to empower local people through education in e-skills and e-learning so that they can participate in shaping a regional knowledge economy and inclusive society.

These examples show that the Internet develops in different socio-cultural forms by being crafted out of specific sets of relations of production, narratives and forms of participation. By being sensitive to the interdependency of these three dimensions of the socio-cultural form, inclusion is more likely to be fostered because the Internet will be shaped to meet the needs and potential of local people to enable them to participate in the richness of social life – economic, political and cultural – in a genuine and vibrant civil society.

It is necessary for such an ideal, inclusive, civil society to be open and democratic, with freedom of expression and movement.[11] The focus of this

chapter has therefore been on the importance of ensuring participation and the conditions for participation for all so that the Internet can be harnessed for the purposes of inclusion and not used solely as a tool of control and surveillance.[12] However, as discussed earlier in the book, the increasing use of ICT not only has the potential for new freedoms but is also making surveillance pervasive in society (Lyon, 2001a, b). The character of this surveillance is ambiguous in that it has a 'care and control' dynamic to it (ibid.) in which individuals exchange aspects of their privacy for security and convenience in most domains of contemporary life. A key part of participation in Internet-related communication and services involves using some methods of identification and authentication. To access systems and services, users need to provide information such as social security numbers, passport details, bank details or work information, depending on the context of use. This virtual identity is shaped through an individual's ability to have the right credentials and status to warrant online access – thus inclusion is based on a range of eligibility criteria, which others in situations of exclusion may lack. Access is therefore being controlled via a range of authentication criteria, which may reinforce social exclusion.[13] Digital inclusion therefore has both care and control aspects to it, since it has the capacity to empower individuals, regions or countries or exclude them and lock them into dependencies. The use of the Internet in relation to the dynamics of inclusion has to be carefully monitored. If it is used as a tool of control and incorporation then it can generate exclusionary situations in which individuals are curtailed from freedom of expression and movement by being heavily policed through their electronic profile. However, if access to the Internet is supported by transparent and accountable services in which individuals have access to their own data (see Chapter 6) then it can be a tool that might serve in policies for inclusion into information based economies and societies.

Conclusion

The dynamics of inclusion and exclusion in contemporary society are related to the innovation stage of the socio-economic paradigm, which is currently that of globalization underpinned by the Internet and the networked organization of capital. These relations of production are supported by neoliberal narratives that posit the market as the most efficient mechanism for the distribution of resources and one of ensuring individual freedom. However, in relation to participation, globalization, and the development of flexible production processes are undermining the capacity of national states to develop and maintain social welfare programmes to support people in situations of exclusion. Situations of exclusion are

multidimensional and the way in which the Internet, as a socio-cultural form, plays out in varying situations shows that the digital divide is located within existing inequalities. The ways in which the Internet is becoming embedded in social life (to varying degrees across the globe) means that the lack of access and the knowledge to utilize it curtails participation in society. A key aspect for fostering inclusion is building capacities in individuals, communities, regions and nations to utilize ICT and 'knowledge' for economic and social purposes. The aspects of access and knowledge, as they interact in existing situations of inequality, are played out at the global level whereby developing countries are locked into existing patterns of inequality in relation to advanced economies. Therefore, transnational, informational capitalism and its current institutional arrangements are inducing uneven development across the globe and within nations that puts people at risk of poverty and exclusion (Castells, 2001).