Digital Divide 2.0 and the Digital Subaltern.

By Mike Kent

Introduction

Initial awareness of issues relating to the digital divide were raised by the 1999 study *Falling Through the Net: Defining the Digital Divide* from the Department of Commerce in the United States.[1] The development and perpetuation of a digital divide between the information 'haves' and 'have nots' was framed as a problem of 'access.' In the context of the increasing online population, debates about social inequity have often been directed at technical barriers to access, the physical infrastructure, and economic impediments to the adoption of the medium by all members of society. However, like the Internet itself, the nature of this divide is changing and has evolved in the last decade. New theories of understanding and new strategies of intervention are required to overcome new barriers to access presented by digital divide 2.0. This paper seeks to inform this process by focusing on those currently excluded from access to the digital environment not so much by a lack of physical infrastructure but rather by forces related to cultural capital and consciousness. This group without a voice in discourses about access has become a new type of digital subaltern. However this digital subaltern has qualities unique to the digital environment that they do not share with their analogue counterparts.

Internet Access

When an individual accesses the Internet, they do so alone. While they might be sharing content over the network with others, the actual interface with the screen occurs alone, even if it is in a room full of other people accessing the Internet, such as at an Internet cafe. In order for access to occur a number of elements need to be present. The most obvious of these is the physical hardware of the computer and network. This hardware is enabled by the software that allows it to operate. While these two elements – hardware and software – are important, the third element – wetware – also plays a pivotal role. Wetware is a term less widely deployed than hardware or software. We can trace its relatively recent origins back to science fiction and cyberpunk literature.[2] Wetware represents the knowledge and experience

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[1] J. McConnaughey, D. W. Everette, T. Reynolds & W. Lader (eds), *Falling Through the Net: Defining the Digital Divide*. Washington: U.S. Department of Commerce, 1999.

[2] Rudy Rucker's book with this title won the Philip K. Dick Award for best science fiction paperback in 1989. R. Rucker *Wetware*. New York: Avon Books, 1988.

held in the brain of an individual accessing the Internet, their ability to operate the computer interface at the screen and their literacy in the digital environment on the screen. Unlike hardware and software, wetware manifests as an analogue rather than a digital platform. Visual content from the screen and audio from speakers are interpreted through the eyes and ears of the user.

These three elements form a matrix of access. All three need to be present for any individual point of access to work, and the relative strength of each of these elements will then determine the strength or utility of the access at that point. Each element can potentially compensate for weaknesses in the other two. Powerful computers can run poorly designed software, good software can provide a user interface to aid weak wetware, and a highly proficient user can make better use of their equipment. While all three can act to support the other elements of access, there is also a threshold at which access is no longer available, a point at which the screen (assuming one is present), rather than acting as an avenue for access, will instead become a barrier.

This atomised user at the screen exists in a wider social context, both online and in their immediate physical and social environment, and this also plays an important role in the value of access and its availability. In order to develop a fuller understanding of Internet access, the on and off screen positioning of the potential user must be monitored. This requires the development and evaluation of a fourth element of access – culture-ware or 'cultware'[3] – the context of access in relation to the rest of society.

Unlike the other three components of access, 'cultware' is a commodity that is hard to define and evaluate. Bourdieu in 'The Forms of Capital'[4] touched on the concept of 'cultware' when outlining his development of cultural and social capital. Bourdieu was critical of traditional economics as being too focused on economic capital – the capital that is most easily converted into tender. He argued that a wider understanding of economic practice required an investigation that encompassed more than just a mercantile concentration. This narrow understanding that Bourdieu critiqued is often replicated in the analysis of Internet access,

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[3] For a more detailed examination of 'cultware' please see M. Kent ''cultware': Constructing the matrix of Internet access', in T. Brabazon (ed) *The Revolution Will Not Be Downloaded: Dissent in the Digital Age.* Oxford: Chandos, 2008.

[4] P. Bourdieu, 'The Forms of Capital', translated by R. Nice, in J. Richardson (Ed*.), Handbook of theory and research for the sociology of education* (pp. 241-258). New York: Greenwood Press, 1986.

with the primary focus on hardware and software. Both comprise commodities that can be easily understood in terms of economic capital. Similarly wetware – knowledge and literacy – is an increasingly commodified entity with a cost to obtain and a value to be realised, particularly when related to communications technology.[5] 'Cultware' comprises an equal, if not more important, field of understanding within the digital environment, which is often overlooked for want of an appropriate label for the discussion. 'Cultware' describes the social capital that might enable a person to 'borrow' literacy through someone who can help him or her gain access and solve hardware and software problems. It also measures the networks of contacts that add to the value of online communications.

Early interventions into the digital divide emerged in the context of a rapid expansion of Internet access following the development of the World Wide Web in the mid 1990s. The focus was on providing physical access to the network. More recently these concerns have focused on the provision of broadband Internet access and have followed a similar philosophy.[6] However as Internet penetration begins to plateau in developed markets, new barriers to access are becoming apparent amongst groups who do not currently have access to the Internet, and who have no expectation that they ever will have access to the network.

The Changing Digital Divide

There is a spectrum of Internet access. Research from the Pew Internet and American Life Project[7] demonstrated that the 58% of Americans who had access in 2003 stretched from intermittent users through to those with access to broadband Internet at home. Similarly the 42% of those who did not have access fell into different categories. The study labelled approximately eight percent of the population 'net evaders', individuals who were aware of the Internet, those who had others translate the Internet directly for them by doing online research and communications on their behalf, and those who actively rejected the Internet and avoided all contact. A second group were labelled 'net dropouts', approximately 17% of the population. These individuals have been online, but had since fallen outside the realm of

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[5] The suit of commercial industry certifications from companies such as Microsoft, Apple and Cisco being examples of this commodification.

[6] In the 2008 Australian federal election one of the major points of contentions between the two major political parties was over providing broadband Internet access to rural and remote communities, and how this could best be achieved.

[7] A. Lenhart, J. Horrigan, L. Rainie, K. Allen, A. Boyce, M. Madden & E. O'Grady, *The Ever Shifting Internet Population: A New Look at Internet Access and The Digital Divide.* Washington, D.C.: Pew Internet and American Life Project, 2003.

access, most often due to hardware problems, either with their computer or their service provider. A final group, labelled 'truly unconnected' had no direct or indirect contact with the net. Not only did they not have access, but they also did not associate with others who did have access. This group, consisting of nearly a quarter of the entire population (24%) represent the digital subaltern.

More recent figures for 2008 show that Internet penetration in the United States has grown to 73%,[8] however this unconnected group persists. A report by Oxford Internet Surveys found that in 2007, 29% of people in the United Kingdom have never used the Internet. This study showed that, of those that have never used the Internet, 73%, or a little over 21% of total population, had little or no intention of ever gaining access. Results from a 2005 study showed that the size of this group in the population has changed little despite the growth in the overall percentage of the population that has had access to the Internet.[9]

This excluded group is different to those previously targeted by government policy aimed at crossing the initial digital divide. While there will still be those who are impeded from accessing the technology through absent network hardware and software, this new group of the 'truly unconnected' need to be understood more in relation to both wetware and specific skills needed to interface with the Internet, and also in terms of 'cultware' – the social capital associated with the Internet. This group represents a new divide: digital divide 2.0. Like the development of Web 2.0, from which this new divide draws its name, it is hard to precisely describe its contours. It is linked to the information sharing, facilitation of social networks, and online participation and collaboration that in part define Web 2.0, but, rather than being defined by the presence of these characteristics, it is their absence, and the lack of connectivity and social networks, that define digital divide 2.0.

For this group, without consciousness of their exclusion, or a voice in discourses about access, is rendered in the parlance of Postcolonial Theory, subaltern. This digital subaltern has no online presence, and their condition is unmarked by skin colour, gender or clothing in

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[8] J. B. Horrigan *Home Broadband Adoption 2008.* Washington, D.C.: Pew Internet and American Life Project, July 2008. http://pewinternet.org/pdfs/PIP_Broadband_2008.pdf [accessed 29.7.2008].

[9] In 2005 37% of the population had not used the Internet of which 63% had no intention of gaining access or 21.4% of the total population, in 2007 this group was relatively stable at 21.2% of the population, despite a 5% growth in overall Internet use over the same time period. W. Dutton & E. Helsper *The Internet in Britain 2007.* Oxford: Oxford Internet Institute, 2007. http://www.oii.ox.ac.uk/microsites/oxis/publications.cfm [accessed 30.7.08].

the analogue world. This type of invisibility makes any kind of intervention particularly problematic. They do not share space with others.

The Subaltern

Within Postcolonial Studies, the subaltern has become synonymous with any marginalised or disempowered group, particularly with regard to race and ethnicity. For Spivak in her pivotal essay 'Can the Subaltern Speak?', the subaltern represented 'subsistence farmers, unorganised peasant labour, the tribal and communities of zero workers on the street or in the countryside.'[10] Spivak used the funeral ritual of *sati*, during which a widow would jump or was placed into the burning funeral pyre of her husband, and the banning of the practice in India by the British colonial administration from 1829, to illustrate the subaltern agency of these women. Local indigenous men protested the new laws, claiming it violated the rights of the women concerned to show their fealty to their departed husbands. Spivak characterised this conflict as 'white men saving brown women from brown men.'[11]

Gramsci originally used the 'subaltern' to refer to class, specifically the subordinate class in southern Italy.[12] For Gramsci the construction of the subaltern was intimately linked to economic relations and class-consciousness.[13] The development of the consciousness of the subaltern and their understanding of their position and solidarity with others in a similar position was central to Gramsci's intellectual project. Spivak, through the use of Derrida, then added gender, race and colonialism to the understanding of the subaltern.[14]

> Can the subaltern speak? What must the elite do to watch out for the continuing construction of the subaltern? The question of "women" seems most problematic in this context. Clearly if you are poor, black, and female you get it three ways.[15]

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10 G. C. Spivak, 'Can the Subaltern Speak', in C. Nelson & L. Grossberg (eds), *Marxism and the Interpretation of Culture.* London: Macmillan Education Ltd, 1988.
11 G. C. Spivak, 'Can the Subaltern Speak', in C. Nelson & L. Grossberg (eds), *Marxism and the Interpretation of Culture.* London: Macmillan Education Ltd, 1988, p. 305.
12 A. Gramsci, *The Southern Question.* Translated by P. Verdicchio, Berkley CA.: Bordighera Press, 1995.
13 A. Gramsci, 'The Intellectuals', in *Selections from the Prison Notebooks.* Translated and edited by Q. Hoare and G. N. Smith, New York: International Publishers, 1971, pp. 3-23.
14 S. Gikandi, *Maps of Englishness: Writing Identity in the Culture of Colonialism.* New York: Columbia University Press, 1996.
15 G. C. Spivak, 'Can the Subaltern Speak', in C. Nelson & L. Grossberg (eds), *Marxism and the Interpretation of Culture.* London: Macmillan Education Ltd, 1988, p. 294.

As Spivak's essay illustrates, no one can ultimately question the women who have actually burned on the pyre. For Spivak, commenting on the context of colonial production, there is no place in which the subaltern can speak. This understanding of the place in which the disadvantaged are given voice becomes a central focus of Subaltern Studies. In Spivak's later essays, the understanding of the subaltern grows to include a variety of disadvantaged groups in the west including women and migrants. For Spivak, there is no space for the subaltern to speak and make their experiences and interests known from their own perspective. They are instead spoken for, largely by those who exploit them.

For Foucault, the subaltern was not authorised to talk in the ruling discourse, but rather engaged in many discourses of their own.[16] Homi Bhabha also describes the interaction between colonised and coloniser, noting that it is not always adversarial. He constructs a third space where mediation between the dominant and the subordinate occurs.[17] Both the coloniser and colonised share a physical space, if not the literacy and authority, through which it is possible to communicate. This understanding of a third space, a place where the subaltern can interface with the ruling discourse becomes highly problematised when appropriated into the digital environment, particularly in the context of an understanding of the screen, as the point of access, enabled by hardware and software, that can be traversed only through the literacy of the individual user.

Gramsci said that the path to empowering the subaltern, providing them with a place and authority to speak, required the development of class-consciousness, and specifically solidarity within the working class. In his specific context, this meant the construction of a common cause between industrial factory workers in the north of Italy and the peasant farmers of the south.[18] Significantly, Spivak provides no remedies for subaltern agency; she only describes the problem.[19]

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16 M. Foucault, *The History of Sexuality. Volume One: An Introduction.* Translated by R. Hurley, London: Allen Lane, 1978.
17 B. Moore-Gilbert, 'Spivak and Bhabha', in H. Schwarz & S. Ray (eds), *A Companion to Postcolonial Studies.* Oxford: Blackwell Publishers, 2000, p. 463.
18 L. Marks, 'Antonio Gramsci', *The Marxist Quarterly*, October 1956, volume 3, number 4, p. 233.
19 B. Moore-Gilbert, 'Spivak and Bhabha', in H. Schwarz & S. Ray (eds), *A Companion to Postcolonial Studies.* Oxford: Blackwell Publishers, 2000, p. 464.

R. J. C. Young articulated the potential for the construction of the subaltern to become a vehicle by which to overcome their relative disadvantage:

> The concept of the subaltern ascribed a new dynamic political agency to those who had formerly been described as the wretched of the earth, the oppressed and the dispossessed. By means of the subaltern the oppressed assumed political agency to become the subject of history no longer its abject object.[20]

The Intellectual

Antonio Gramsci in his writing developed the role of the intellectual as one who could represent the underclass and provide them with consciousness of their oppression. Gramsci theorised that in order for a new class-consciousness to enable the subaltern proletariat to take what he viewed as its predestined place as the dominant class in Italy, it needed to overcome existing divisions into different trades. Writing from prison, where he spent the last years of his life after being sentenced by the Mussolini-led Italian government, Gramsci wrote over three thousand pages in his notebooks, which were later smuggled out and published. He devoted an entire volume of these writings to the role of the intellectual. For Gramsci, intellectuals are leaders. As he explained, 'all men are intellectuals, one could therefore say: but not all men have in society the function of intellectuals.'[21] Gramsci postulated that there were two types of intellectuals, the traditional intellectual and the organic intellectual. Traditional intellectuals represent the academy, priests, and writers. While they might see themselves as autonomous to the ruling class, within Gramsci's construction these intellectuals existed within and maintained the existing social order.

> (E)very 'essential' social group which emerges into history out of the preceding economic structure, and as an expression of a development of this structure, has found (at least in all of history up to the present) categories of intellectuals already in existence and which seemed indeed to represent an historical continuity uninterrupted even by the most complicated and radical changes in political and social forms.[22]

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20 R. J. C. Young, *Postcolonialism: An Historical Introduction.* Oxford: Blackwell Publishers, 2001, p. 355.
21 Presumably women are incorporated into this determination as well.
A. Gramsci, 'The Intellectuals', in *Selections from the Prison Notebooks.* Translated and edited by Q. Hoare and G. N. Smith, New York: International Publishers, 1971, pp. 3-23.
http://www.marxists.org/archive/gramsci/editions/spn/problems/intellectuals.htm#nD [accessed 29.6.2008].
22 A. Gramsci, 'The Intellectuals', in *Selections from the Prison Notebooks.* Translated and edited by Q. Hoare and G. N. Smith, New York: International Publishers, 1971, pp. 3-23.
http://www.marxists.org/archive/gramsci/editions/spn/problems/intellectuals.htm#nD [accessed 29.6.2008].

This analysis follows Marx in asserting that the ideas of the dominant classes tend to be the dominant ideas.[23] Gramsci's second type of intellectual, the organic intellectual, was seen as coming from within a class, and providing that class with consciousness and agency. The organic intellectual came from outside the existing social order to challenge its assumptions and power structures.

Spivak constructs the concept of the intellectual along similar lines. However she criticises the attempts by western intellectuals to critique neo-colonialism and act on behalf of those most oppressed by the system for the failure of those intellectuals to take into account their own place within the existing system of oppression. Spivak specifically criticises Delueze and Foucault in this context. Moore-Gilbert notes that within this critique these intellectuals are:

> assuming that they are transparent vis a vis the objects of their attention. In other words such 'radicals' too easily suppose that they are outside the general system of exploitation of the 'third world' – in which western modes of cultural analysis and representation (including 'high' theory itself) and institutions of knowledge (such as the universities in which such theory is characteristically developed) are in fact deeply implicated.[24]

By trying to provide a voice for the subaltern, these theorists are instead standing in their place, and representing or speaking on behalf of the subaltern themselves. They follow Gramsci's understanding of the natural intellectual, while thinking that they are outside the existing social order, when they are in fact implicated in maintaining it. Spivak is also engaged in this process in the very act of describing its manifestation in others. While intellectuals may play a role in perpetuating the existing order, they are still best positioned to speak for the underclass.[25] Ultimately it is the role of the intellectual, following Gramsci, to provide a voice for, and consciousness of, the subaltern – this will be particularly true for the digital subaltern.

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23 Z. Bauman, *Liquid Modernity.* Cambridge: Polity Press, 2000.
24 B. Moore-Gilbert, 'Spivak and Bhabha', in H. Schwarz & S. Ray (eds), *A Companion to Postcolonial Studies.* Oxford: Blackwell Publishers, 2000, p. 453.
25 B. Moore-Gilbert, 'Spivak and Bhabha', in H. Schwarz & S. Ray (eds), *A Companion to Postcolonial Studies.* Oxford: Blackwell Publishers, 2000, p. 453.

The Digital Subaltern

The digital subaltern is made up of those without the 'cultware' needed to access the Internet. They are not seen from 'on screen' and they do not share a common space in which dialog can occur. They are trapped in a digital periphery where a digital centre cannot be experienced. Theories of colonisation and the analogue subaltern were modernising, grand narratives with big answers to big problems. The digital subaltern presents a post-modern strategy, fickle and fragmented; a person can be empowered in one way and disempowered in another, moving quietly and quickly move between those states. The digital subaltern is significantly different to its previous, analogue construction. However the potential to produce two separate strata of citizens remains.[26]

The digital subaltern like their analogue counterpart has no place in which to speak and no consciousness of their position. Unlike their analogue counterparts however they do not have any shared space where a potential dialogue with those in power is possible. With no shared space with those online, the digital subaltern has no ability to perceive what they are excluded from. Their inability to access the Internet obscures their view of that from which they are excluded, and at the same time inhibits society's awareness of their exclusion. This results in an environment for the digital underclass where they are denied a voice, much like their off-screen counterparts (and obviously the overlap between these two groups will be not insignificant). They are as invisible online as the Internet is to them while they face a screen without the literacy to activate its potential and without the 'cultware' that might enable it. The screen becomes like the funeral pyre for the *sati*, messages do not come from the other side to explain the subaltern's experience in their own words.[27] They can only be spoken about and for by others online, and while they remain outside, this dialogue will occur without them.

The postcolonial theoretical construction of the subaltern recognises the fragmentation of class structure at the periphery, just as the broader area of study recognises the fragmented structure of the core. The digital subaltern represents an atomised and isolated underclass, no

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26 In the early days of the World Wide Web Kroker warned of a potential class division between the working class: 'ground in localised space', and the technocratic lass 'floating away in the virtual zone of hyperspace' A. Kroker, 'Virtual Capitalism', in S. Aronowitz, B. Martinsons & M. Menser (eds), *Techno. Science and Cyber Culture*. New York: Routledge, 1996.
27 This is in no way meant to underestimate the horrific nature being burned alive.

longer directly marked by social class, race or gender. These concepts are activated on the analogue side of the screen.

Foucault theorised the analogue subaltern as not having authority within the discourse of control, in which everyone speaks and which exists all around them.[28] For the digital subaltern this discourse takes place in a venue of which they have no experience. This greatly limits the potential for Bhabha's third space in which translation can occur or common ground can be found; a place where this might occur exists only through the screen. The edge that separates core and periphery in the Internet enabled, digital environment is sharp and small.

Gramsci construed the south of Italy as having the status of exploited colonies – what Lenin characterised as Internal Colonies.[29] Gramsci pondered how to have the proletariat factory workers in the north of Italy share a common cause with the peasant farmers in the south in the context of a class struggle. Whereas the south of Italy represented a geographic region within the borders of the nation, those who are the subject of digital 'colonisation' are harder to group geographically. People access the Internet on their own as atomised individuals. Consequently, exclusion itself becomes an atomised experience. The digital subaltern is confronted with the barrier of the screen, they are without consciousness as a group, unknowingly united only by their ignorance of what they are missing. This creates a relatively clean, black and white line through the increasingly grey area of digital postcolonial relations within the borders of the Internet. This is the challenge presented by digital divide 2.0.

Consciousness

Central to the construction of the subaltern both on and off screen is their lack of consciousness of their position. For Marx, the role of the party was to raise the consciousness of the workers. Those without political consciousness, the lumpen proletariat, had to be made aware of their exploitation and become politically aware as a precursor to a proletarian

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28 M. Foucault, *The History of Sexuality. Volume One: An Introduction.* Translated by R. Hurley. London: Allen Lane 1978.
M. Foucault, 'My Body, This Paper, This Fire', *Oxford Literary Review.* 1979, volume 4 issue 1, pp. 9-28.
29 V. I. Lenin, 'The Development of Capitalism in Russia: The Process of the Formation of a Home Market for Large Scale Industry', *Lenin Collected Works.* London: Lawrence and Wishart, 1968.

revolution.[30] This process, with all involved gathered together on the factory floor, seems relatively easy when compared to the process that Gramsci sought to initiate in raising consciousness amongst the geographically and socially dispersed peasantry of Southern Italy and their industrialised, potential class allies in the north.[31]

For the digital subaltern, attempts to raise consciousness are further complicated by their invisible presence both on and off screen. There is no one to act as a translator as is the case for the 'net evaders', or direct experience of the 'net dropouts'. In order for any translation to occur, a way needs to be found to locate and communicate with this group, to translate from the digital environment, and facilitate the development of the matrix of access that will allow these excluded people the potential to access the Internet. The 'truly unconnected' have no experience of their exclusion, further complicating attempts to enable any consciousness of their position.

For Gramsci's organic intellectual to be able to speak for the subaltern, to act as a translator, they must themselves possess the literacy necessary for access. Yet the digital environment changes the strategy for the intellectual as well. Translating for 'cultware' and literacy in the current, increasingly post-industrial environment requires different strategies than translating between geographic locations and classes in the industrial environment that confronted Marx and, later, Gramsci.

The digital subaltern needs to be provided with a voice in discourses of access, that is denied by their current circumstance. While for Gramsci the state represented an instrument of oppression, in relation to digital divide 2.0 the state can potentially act as a vehicle to alleviate disadvantage. As well as being spoken for, the digital subaltern needs to be spoken to, and there are problems with translation here as well. Those with highly developed 'cultware' and digital literacy do not necessarily have the skills to speak to this group in the language required to translate between the two. The digital subaltern may be most easily communicated to about the Internet by their peers – a digital version of the organic intellectual.

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30 K. Marx K. & F. Engels, *The Communist Manifesto.* Harmondsworth England: Penguin Books, 1967.
31 A. Gramsci, *The Southern Question.* Translated by P. Verdicchio, Berkley CA.: Bordighera Press, 1995.

Until recently, the drive for Internet penetration focused on promoting the benefits of Internet access, and facilitating the provision of physical infrastructure, assuming, correctly, the existence of a large public body with the desire to be online. This group was predisposed to getting access, existing within sufficient bounds of 'cultware', literacy, economics, and with the potential to find useful content and the capacity to communicate online. This acceptance of the Internet required accessibility to fall within the economic and cultural parameters, and to have access to the infrastructure to provide carriage for, and interpretation of, the TCP-IP protocols. Strategies to encourage Internet take up have focused on these different areas.

However, growth in the penetration of the Internet has slowed as markets have 'matured' and the Internet has become ubiquitous throughout society.[32] The slowing of Internet growth indicates that those citizens with the predisposition for access, the latent 'cultware' to activate the Internet, have been or will soon be reached and included. Different countries will have distinct levels of a predisposed population for access, depending on their wealth, infrastructure and level of education. The borders of the Internet are becoming less porous with those left behind walking invisibly through the off-screen population as the digital subaltern. The concern with regard to Internet access must now move from a position of trying to encourage those who could have access but have not taken it up, to those who lack the 'cultware' to engage with the digitised environment, to overcoming the barriers of the emerging digital divide 2.0.

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32 M. Madden & L Rainie, *America's Online Pursuits: The Changing Picture of Who's Online and What They Do*. Pew Internet & American Life Project, 2003.
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