

POSTCARD

11. The multiple forms of digital inequality

Ben Ramalingam and Kevin Hernandez

The digital revolution, like every other revolution, has produced winners and losers. As of 2015, nearly 60 per cent of the world's population – 4 billion people – lack access to the internet, while 2 billion lack access to basic mobile phones (World Bank, 2016). These digitally excluded 4 billion are unable to access income-generating opportunities, goods and services based on information and communications technologies (ICT), and cannot fully engage and participate in the digital economies, societies or politics that shape their lives. As Manuel Castells predicted (in 1996), the digital revolution divides the world into two populations: the interacting and the interacted.

The opportunities and challenges of digital technology have not gone unrecognized in development policy and practice. The most salient illustration is Sustainable Development Goal (SDG) 9 on infrastructure and innovation, which calls for enhanced ICT access and affordable internet access worldwide by 2020.¹ This target, and the decades of work leading to it, are laudable and important. It has the potential to make a difference to millions of lives, especially in the rapidly changing context of digital technology. But this won't happen unless some of the important lessons that have been learned about the reality of existing digital inequalities are taken into account.

Tangible dimensions of digital inequality include apparatus inequality and spatial inequality. Apparatus inequality relates to differing levels of physical and technological ownership and access, based on the presence and adequacy of hardware, software and connectivity. Owners of basic mobile phones – with no alternative internet access – have been described as 'stuck' in text and voice (Zainudeen and Ratnadiwakara, 2011). Spatial inequality concerns differences in digital coverage and participation between urban and rural areas, city centres and outskirts, and developed and developing countries.

This has both global and local manifestations. Developing countries are less likely to have their contexts and histories represented on Wikipedia, and developing country citizens are much less likely to contribute articles (Graham et al., 2014). Looking at contemporary attempts to increase digital access, it is fair to conclude that the focus has been on addressing these tangible inequalities in a relatively superficial manner, as if they can be divorced from socio-economic realities.

However, there are also various intangible forms of digital inequality that should not be overlooked or dismissed. For example, inequality of autonomy concerns the degree of control individuals have over their digital access: owners of personal equipment exert more control than users of shared or public equipment. Inequality of skills concerns digital literacy levels: some people can only consume information, some can produce and upload new content, while others understand how to manage data, programme applications, or build networks and platforms. Generally, intangible digital inequalities cannot be separated from socio-economic forms of inequality, including economic status, education, class, gender and age. Intangible inequalities are those that see people excluded because of who they are.

Tangible and intangible dimensions are intricately interwoven and cannot easily be tackled in isolation from each other, or from other forms of inequality. Inequalities stemming from social stratification are strongly correlated with digital inequalities: the digital world frequently mirrors the analogue one and reinforces it. For example, inadequate infrastructure in remote areas makes internet access expensive and inefficient, which excludes the poor, while the lack of basic digital skills and access in disadvantaged areas further entrenches inequalities of opportunity. As well as being complex, digital inequalities are not static.

The form of digital inequality that exists today, when billions of people have access to a mobile phone, is naturally very different to that of 1995, when almost no one had a mobile phone.

We conclude by making three specific suggestions to ensure that the global community doesn't hit the SDG target while missing the point about inequality.

First, a better understanding of the many forms of digital inequality requires collaboration between social, computing, humanities and physical sciences to understand and anticipate the dynamic consequences of technological change. There is also potential to engage scientists from future 'game-changing' revolutions such as biotechnology and nanotechnology (DiMaggio and Hargittai, 2001).

Second, tackling digital inequalities requires broader societal, political and economic engagement. Leaving digital development to digital scholars, practitioners and policy-makers alone perpetuates narrow views of both problems and potential solutions. The drivers shaping digital access extend well into the analogue world, and we need to account for this in our policy and practical frameworks.

Third, we must relinquish views of the digital bottom 4 billion as passive agents waiting to be reached through elaborate technological innovations. Just as broader debates and efforts on inequality are moving beyond notions of 'reaching the poor' and towards empowering them, we must start thinking and doing more in the emerging realm of digital empowerment.

Why is this important? The risk is that by hitting the SDG 9 target by 2020 only by focusing on tangible indicators of access, we will address only technological forms of digital inequalities, to the detriment of millions if not billions of people.

Note

1. See <https://sustainabledevelopment.un.org/sdgs>.

Bibliography

- Castells, M. 1996.** *The Rise of the Network Society, The Information Age: Economy, Society and Culture, Vol. I.* Cambridge, Mass. and Oxford, Blackwell.
- DiMaggio, P. and Hargittai, E. 2001.** From 'digital divide' to 'digital inequality': studying internet use as penetration increases. Working Paper No. 15. Princeton, N. J., Center for Arts and Cultural Policy Studies, Woodrow Wilson School, Princeton University.
- Graham, M., Hogan, B., Straumann, R. and Medhat, A. 2014.** Uneven geographies of user-generated information: patterns of increasing informational poverty. *Annals of the Association of American Geographers*, Vol. 104, No. 4, pp. 746–64.
- Hernandez, K. 2015.** Connectivity flying high: bridging the digital divide from the sky. Master's thesis. Brighton, UK, IDS.
- Schradie, J. 2011.** The digital production gap: the digital divide and Web 2.0 collide. *Poetics*, Vol. 39, No. 2, pp.145–68.
- World Bank. 2016.** *World Development Report 2016: Digital Dividends.* www.worldbank.org/en/publication/wdr2016 (Accessed 9 June 2016.)
- Zainudeen, A. and Ratnadiwakara, D. 2011.** Are the poor stuck in voice? Conditions for adoption of more-than-voice mobile services. *Information Technologies and International Development*, Vol. 7, No. 3, pp. 45–59.
- **Ben Ramalingam (UK)** is a researcher, author, advisor and facilitator focusing on global development and humanitarian issues. He is currently leader of the Digital and Technology Cluster at the Institute of Development Studies (IDS).
- **Kevin Hernandez (USA)** is currently a research assistant at IDS. His main areas of interest include digital technology, the role of business and markets, and the use of foresight methodology in development.