Users and non-users of next generation broadband

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Abstract

This paper explores the contexts and motivations that underpin the uptake of Australia’s National Broadband Network (NBN). The findings are drawn from a mixed-methods research study of households using surveys and interviews conducted in 2011 and 2012 in an early release site of the NBN rollout. Whilst use and non-use have traditionally been treated as questions of digital access, inequality and exclusion, there is evidence for emerging forms of non-use characterized by more critical and discriminating approaches. We contribute to this evidence, but our findings suggest that use and non-use of high speed broadband do not occur in isolation or as an expression of individual choice, but as part of increasingly dense household media ecologies of digital infrastructures, devices, services and knowledge.

Keywords

Technology use; non-use; broadband; household adoption; Australia; National Broadband Network

Introduction

The issue of internet use and non-use were traditionally treated as simple questions of inequality and exclusion, accounted for in terms of lack of access to technologies, and addressed by greater provision of those technologies. More sophisticated approaches argued that personal, social, cultural and economic conditions were important to use and non-use (e.g ACMA, 2009; Warschauer, 2003); that the prevailing emphasis on technology-provision alone did little for effective use. More recently, the role of individual agency in the context of a diffusionist model of uneven yet inevitable technology adoption has been reasserted, a position which points to a growing population of individuals who actively choose to evade (Lenhart et al., 2003), reject (Wyatt, 2003) or resist digital media (Satchell and Dourish, 2009).

This paper draws attention to the ways individual agency is mediated by the relational, material and interdependent contexts in which use and non-use takes place. We seek to understand how technology innovations are incorporated – or not – not in and of themselves, but as part of a dynamic household media ecology shaped by issues such as complexity, accumulation, functionality, interoperability and management.

Methods

This paper is based on research findings from a study of household broadband adoption and non-adoption during the early rollout stages of the Australian National Broadband Network (NBN) (Nansen et al., 2013).

To investigate household broadband adoption, we visited 2600 homes in the early release site of Brunswick, Victoria. We surveyed 282 households in late 2011, including homes with an NBN connection and those without, and conducted follow-up interviews (based on a purposive sample of various internet connection types) and surveying of a smaller subset of these households.
Background

Over 80% of Australian households now have internet access, with over 90% of these connections via broadband (ABS, 2012; Ewing and Thomas, 2012).

These metrics (internet, broadband, no internet) offer a starting point for analysis, yet inattention to both the variability and interdependency of internet infrastructures within the sociotechnical contexts of households disregards the ways technologies complicate patterns of adoption and non-adoption. Households have differing internet options available to them (e.g. dial-up, DSL/ADSL, fibre-optic, cable, satellite, wireless broadband), some of which are beyond the household’s control, and this complexity is compounded by the aggregation and interaction of the household ecology of hardware devices, internal connections, software, and of course the digital competency and interest of householders (Shepherd et al., 2007; Wilken et al., 2011).

Findings

The survey data (see Figure 1) revealed that NBN use and non-use involved a number of factors. These can be grouped into three categories, which show:

1. 36% of non-using households were not in a position to make a decision to adopt – due to lack of awareness (17%), service provider difficulties around contracts or plans (5%), lack of communication from NBN installers (6%), or because their landlord had not agreed to a household connection (8%).

2. 28% of non-users had made a decision to refuse to adopt – due to perceptions of increase cost associated with the NBN (17%), or satisfaction with their current internet (11%).

3. 28% of non-users were in the process of adopting the NBN – 13% of respondents had the NBN equipment installed but not activated with a service provider yet, while a further 15% were in the process of organizing a service with an internet provider but this was delayed.

Figure 1: Reason for non-adoption of high-speed broadband
The quantitative data suggests that a range of external factors mediate and shape use and non-use within household decision-making, whilst the qualitative data below helps to unpack some of these factors.

Discussion

Brunswick residents were among the first to confront a new set of decisions, dealing with unfamiliar broadband technology, and an installation process that was still in an early stage of development. Yet, issues of broadband literacy, uncertainty in decision-making within a complicated environment of internet service provision, and difficulties integrating new technologies into the existing household media ecology are common difficulties, and were evident in our discussions with households. These findings revealed that use and non-use of the NBN does not occur in isolation, and must be considered as part of an aggregation of household media and technologies, their provision and management, and their understanding within the wider media infrastructure.

Refusal to adopt the NBN was often a decision about arrangements of complementarity or substitution within the household and wider media ecology, based upon the affordances of different forms of broadband internet: “My wife and I have moved to wireless broadband, we each have one, on different accounts ... it offers us flexibility because we just moved house, and if we used the hard-wired broadband it would be hard for us to connect and disconnect the service if we move.”

Reluctance to adopt the NBN was often explained by an absence of information, including but not restricted to the NBN, extending across the ecologies of technologies and services: “It’s always complicated; I don’t know why it is that telecommunication companies make their products incomprehensible.”

In the face of complexity, the reluctance of many households seemed to be a decision not to decide: “I couldn’t be bothered changing everything around because then you have to get new modems and all that sort of stuff...”

Resigned adoption of high-speed broadband often emerged as a response to the inevitability of technical innovation, albeit underutilized: “I probably have enough computing power on my computer to design the space shuttle and I use it 90% of the time as a word processing machine. And the speed of the internet I could probably do something extraordinary but I won’t use it...”

Further, NBN adoption did not conclude with activation but often required ongoing forms of regulation to manage issues of installation, integration and interoperability with the existing household equipment: “We had very poor signal coming from the Wifi so they had to install a signal amplifier, a boost to the Wifi. We had a Wifi before but they gave us a new modem...”

Finally, adoption of new technologies is also associated with disuse and problems of redundancy: “I’ve got boxes down there of cables and leads and ports and every other little bit that I’ve bought over the years to get rid of.”

Conclusion

The introduction of the NBN is occurring in an environment in which the accumulation of new devices and services is often accepted as part and parcel of contemporary living, and in which short life cycles, quick turn-over and high redundancy rates would appear to be a digital industry standard. In these contexts, non-adoption needs to be considered less within a dichotomy of use and non-use, and instead as part of an increasingly differentiated landscape of engagement in which limited, partial and legacy uses of digital media and the internet abound. The decision to use or not may be an expression of individual choice, yet it is also shaped by complicated ecologies of digital infrastructures, devices, services and knowledge.
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References

Canberra: ABS.


