

# [End] Users as Designers: The Internet in Everyday Life in Irish Households

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**ABSTRACT:** This paper presents a study of Irish households, the internet and everyday life. Social studies of technology draw heavily from anthropology, not only in ethnographic methodologies but also in the ways in which such data can be understood and interpreted within the contexts of everyday life. To achieve this, the concept of the domestication of (media) technologies has been developed to describe and analyse the processes of technology's acceptance, rejection and use. Domestication is employed as a structural and analytical framework to achieve an empirical understanding of the domestic user. Based on a critical analysis from an anthropological perspective, the paper will revise the original domestication of the concept of technology. The notion of technological black boxes and I-methodology strategies are critiqued. This paper calls for users to be conceptualised as active agents in the overall design process and not as just end users who become active once the artefact has become commodified.

**KEYWORDS:** appropriation, computer, domestication, internet, Ireland, the home

## Introduction and background

There has been an important transformation in the makeup of Irish domestic media networks. Over the last decade or so, a rapidly growing number of Irish households have obtained access to computers and the internet, as well as to a related cluster of digital multimedia 'content' and other products. Irish people are now using the internet in the home, yet this has not been documented in any serious academic or critical fashion. The consumption of new media technologies, in particular the internet, then becomes a matter of increasing concern for academic research, not only in the fields of technology adoption and use but also in wider anthropological and sociological domains.

In Ireland, studies of technology use (in particular new media technology or tradi-

tional media) have tended to be general and wide scale (CSO 2001a, 2001b, 2003a, 2003b; European Commission 2000, 2001a, 2001b; ISC 2000; MRBI 2002). This trend of hard statistical quantitative surveys of Irish households has taken precedence over small scale, user-focused, ethnographic studies that produce richly lived histories of the experience, role and value of technology in everyday life (e.g., Aune 1996; Frissen 1997; Bakardjieva 2001; Ward 2005). Apart from some commercial and official surveys of general use, we know very little about Irish internet users. Moreover, we lack a deep, longitudinal study that goes beyond mere statistics and generalised characteristics. Such studies, listed above, prove useful in some contexts, as they provide a 'helicopter' perspective of Irish domestic use with easily managed packages of numbers; one might be

forgiven for thinking, back in the early 2000s, that all ‘early adopters’ of internet technologies were young, middle-class males, living and working in Dublin.

To address this lack of academic treatment, this article will unpack specific contexts of use and will detail how Irish users are creating and designing their own human-techno relations, actively translating the internet as something valuable and meaningful. The core argument holds that human-techno relations are complex, fluid and problematic. To this end, it argues for a move away from linear user adoption models to a more grounded and holistic theoretical approach. The research involved a qualitative in-depth study of 16 Irish households in order to provide an understanding of the intricate and subtle processes of ‘domestication’ of technology (Silverstone et al. 1989; Silverstone and Hirsch 1992; Silverstone and Haddon 1996; Lie and Sørensen 1996; Berker et al. 2005).

## Methodology

Domestic users of technology are not simple research objects contained within a simplified context, but pose complex and problematic challenges for researchers (Morley 2000). A defining element of quantitative analysis is the intention of detachment, or as Palys put it, ‘objectivity through social distance’ (Palys 1997). This study took the opposite approach. It relied on qualitative research techniques and, in essence, aimed to achieve the contrary to Palys’ assertion – searching for subjectivity through social incorporation. The subjective is incorporated because an in-depth analysis and study of the household is required to yield meaningful data. The household setting is arguably the most private area for individuals. Therefore, in order to gain access to that private social space, a researcher must adopt a methodology that is sensitive to the user, the household and the user’s space. This sensitivity can lead

to the gathering of the most useful data from the field.

Qualitative research tends to engage with a small number of people in a more in-depth manner. Thus, qualitative research within media studies (and generally) often draws from anthropology, using ethnographic research methods (such as fieldwork, observations, long-term placements in the research field, in-depth interviews, focus groups, etc.). The ethnography of ICTs examines the use of different media and communication devices in a socio-cultural context. It thus combines use as well as the ICTs themselves, since it is in the actual uses and the communication situations that the meanings of ICT use emerge. It takes into consideration the everyday environment of the user and is able to locate use within interactions.

The research was conducted in several North Dublin suburbs between 2000 and 2003. A number of research techniques were employed to obtain a rich picture of the nature of internet consumption and use (or non-use) in the household setting. In-depth interviewing was the main research instrument. To complement the interviews, the respondents were asked to complete a time-use diary describing their media use. Participant observation was also used to examine how respondents spoke about their media use, their internet use and their household relations, their motivations for obtaining the internet technology and their hopes and fears concerning their relationship to the artefact. The location of the internet technology was also recorded along with the rationale for placing it in that space.

## Technology Design by Users: Motivation and Justification of Purchase

Education, in its broadest sense, was identified as the primary motivation for acquiring the internet. Education as a purchase motivation was most prevalent in working-class

households. In several instances, the parents were early school leavers, leaving in their mid-teens, despite the fact that in Ireland, it has been quite common for a high proportion (82%) of second-level students to complete their Leaving Certificate (NESF 2002). The rationale behind these purchasing decisions is the improvement of both the parents' own and the children's education.

The parents who took part in the study claimed to have experienced wider social pressures. Such pressures are bound up with the issue of education as a motivating factor to obtain the computer. A 'push' force and veritable moral panic about the use and value of computers (and the internet) in society has fuelled this pressure. Penetrating dominant Information Society discourses have played on the utopian myth that computers can bring about inclusion in an increasingly electronic world (Hynes et al. 2008). Between school curricula and Tesco's 'computers for schools' initiatives, the parents among the sample experienced some level of moral pressure to acquire a computer (with internet access) for use not only for their children but also for themselves.

This is coupled with the more self-inflicted pressure of 'keeping up with the Jones'. In such cases, the internet/computer is not considered to be a luxury purchase, but rather is associated with educational and self-promoting qualities.

The following direct quotes highlight the reasons, justifications, fears and motivations experienced by respondents as they sought to rationalise the purchase of the technology. These quotes also show how the internet is conceptualised as a major redeeming<sup>1</sup> technology among this working-class segment of the sample – it is perceived as a technology to aid the attainment of better grades at school and to increase the likelihood of getting jobs for the unemployed. It is possible to detect evidence of pressures referred to above and a sense of foreboding exclusion if the computer is not factored into their daily lives. In the Boland

household, Sandy (female, 35: part-time sales assistant) states: 'He wanted to get one, and for the kids, cos everything is computers now.'

Her husband, Mark (male, 31: bus mechanic) replies: 'That's the way everything is going to go. By the time they are our age, if they haven't learned computers they won't ever be able to do anything. They'll never be able to get a job or anything like that. It's just the way society is going, everything is computers.'

The Marlon household supports this view. Jenny asserts: 'I think kids need to know it for them, because in a couple of years time that's all it's going to be, and that's all it's going to be in the workforce.' Similarly, in the Lawlor household, Deirdre (female, 37: housewife) states: 'It's important to keep up with what's going on, especially where the children are concerned .... They need to know for the future because, if they are going out to jobs or courses or college, they are going to need to know how to use it.'

This is also evident in the O'Connell household, where Karen (female, 34: secretary) explains: 'It's for education, but it's for ourselves too. I think we knew we had to get one at some stage, it was just a matter of when .... You weren't up to the times if you didn't have one. We did feel pressure but it was something in the pipeline that we wanted.'

In the Houghton household, Betty (female, 48: mother and mature student) recounts the pressures exerted on her, first, to purchase a computer and, second, to get connected to the internet: 'It's an everyday use now, it has to be.' Betty continues to outline how the combined pressures of education and society coerces households into thinking that having a computer is a must for modern living: 'I knew I had to have a computer for the girls, and I felt very guilty and very pressurised to have the computer here even though I am struggling to pay for it. It's not a luxury, it's a necessity. I feel no guilt in having it, whereas I could do without a VCR now rather than a computer, and that's basically it.'

The quotes presented above come from working-class households. Each informant speaks of certain pressures from external sources, such as society and educational institutions, as the motivation to acquire the technology. The internet and computers are perceived to have a transformatory effect on households once acquired. However, the technological competency required to experience the full potential of internet or computer functions is often the missing element.

It is noticeable that many of the respondents have sought out ways and means of improving and developing their expertise. In some cases, respondents (in particular the female working-class informants) attended purpose-run courses by schools in their vicinity. Other respondents undertook formal training in programmes, such as the European Computer Driving Licence (ECDL), in order to realise their potential and bring some knowledge and technological competencies into the domestic sphere, both for themselves and for their children.

Similarly, other respondents spoke about how acquiring a computer was either job related or educational in some ways. The computer was seen as a necessary piece of equipment when starting a university or college course. In other instances, as workplaces became increasingly automated, the computer became a necessary part of working daily life. In this way, computers were provided by the company and a sense of 'forced' adoption occurred. In no instance was the computer reported to be obtained for entertainment or leisure purposes. However, as the time-use diaries showed, while the motivation to acquire a computer was laden with good intentions, the resultant use and incorporation of the technology swiftly changed once the computer was adapted to the patterns and routines of everyday life in the home. While the majority of respondents reported that educational factors influenced their decision to obtain a computer, a number of user profiles emerged as the respondents

described how they actively designed a way of fitting the computer/internet into their everyday lives.

### *User profiles*

The sample was a diverse group of people, spread across class, gender, background, employment and household configuration variables. It must be recognised that Irish internet users are not a uniform group. However, a number of thematic groups emerged in which to discuss similarities between individuals. During the empirical analysis, four profiles emerged, each with similar properties, characteristics and qualities: talkers, searchers, workers and dismissers. The intention was to identify a style of internet use common to each group, and to use this as a map to revisit the sample and to draw conclusions about internet usage as a whole.

### *Talkers*

The talker category consisted of people who considered the internet to be a medium for communication, and was somewhat dependent on it, at the expense of other communication media. A shared trait highlighting this dependency was the maintenance of a wide circle of friends and acquaintances via online electronic communication. Another trait shared by talkers was their engagement with a mode of conversation solely reliant on text. This form of communication supplemented their real-time discourse.

One of the first actions of talkers, once they were online, was to check their email. The feeling of connection with friends and other people was the drive or motivation behind talkers' internet use. 'The web' to talkers is associated with a network of friends and the ability to be in contact and be contacted. Surfing the web for pieces of information held little attraction for this group. Since talkers are relatively seasoned web users, the novelty of the internet and available information had worn off. The

information sought by them consisted of updated accounts accessed in the fewest clicks possible. In addition, talkers were experienced computer users with knowledge of cost-saving measures to ensure that their participation online was cost-efficient, maximising their use.

Joanne Ryan (female, 17: student) says: 'Yeah, well if we were organising anything we would do it through email. You can send it around how many people you want instead of ringing up everyone.'

Another example of a talker was Jean O'Rourke (female, 23: part-time lecturer and PhD student). She had several online personas working together simultaneously. She was conducting her doctoral studies via an online message-board system, designed by the university for a global student base. On email, she maintained a wide network of friends and work contacts. Jean O'Rourke noticed a different side to her personality when she communicated online, believing that her personality is suited to electronic communication because:

I'm working on it and education is on it, my friends are on it, everything, my whole lifestyle. My whole lifestyle is suited to the internet, it's all about personality .... The philosophy or the psychology behind the internet is very similar to my own, so it just happens that we are very compatible. It hasn't shaped my life and I haven't adapted to it, it's just my personality. I've always been a type of person that wants to do a million and one things. I prefer the fact that the internet has not only allowed me to do the PhD but also to work and not to be tied to anyone place and that's why I like the internet.

Martin Smith (male, 35: unemployed) found electronic communication to be a suitable replacement for traditional communication media:

Email – being able to keep in contact with people that previously I might have intended to keep in contact with by ordinary mail but I know I wouldn't have. I have definitely kept in touch with people and a lot more people who live abroad mostly by email than I would have done

if email didn't exist, and phones as well; it saves me having to use the phone. I don't like speaking to people on the phone anyway,

Martin Smith prefers this style of communication because he can save money and converse in his own time and he describes how the maintenance and expansion of his network of acquaintances has benefited from online communication.

In the next two excerpts from an interview with Mairead Mulhare (female, 31: unemployed, separated mother of two young children), we can see how the web has begun to serve a purpose in her life as being more than just an information or communication medium. The first excerpt deals with her uses of the web. It clearly highlights how her use is shaped by communication.

I just put it on and go into a chatroom or my brother would send emails or I send him back replies or stuff. He's in Australia at the moment, in Perth .... At the moment like being here, being a lone parent, I can't go out socialising as much, like chatting with other Unison users in the evening, it has become good for getting to know other people .... It really gives me more confidence, really. I don't really have many friends. It's just mostly family, I have a couple of friends that I see or go out with.

In the second excerpt, it is possible to recognise that the web has had a transformative or empowering influence in certain aspects of her life. She speaks of the lack of company in her life, and how this has become a driving force behind her use of the web as a communicative medium. She explains: 'I don't get the opportunity really to talk about anything, because I am just here all the time. I don't have a job. I had a job but I don't any more .... I've always sort of been alone, a lone sort of person, you know just having my husband or my family just here. I'm just sort of coming out into the world.'

In the excerpt, Mairead speaks of how her online communication has helped her to

develop another side to her personality, one that lay undiscovered during real-time interactions. Taking into account her current state of affairs and social characteristics, she conceptualises the internet as: 'My boyfriend and my friends rolled into one'. This quote is crucial to how Mairead frames the internet in her life and what it means to her. In fact, it is her link to the social.

The uninterrupted message flow of online communications can make it an attractive means of expression. For talkers, the internet has become a major, if not defining, technology in their lives.

### *Searchers*

This group is characterised by heavy use of the internet for research and topical interest purposes. Some searchers saw the internet and its wealth of information as a type of safety net. Although some searchers were well educated, the majority of those in the sample were not, and for them the web somehow compensated for a lack of education. It can be compared to a set of encyclopaedias, where interest and information required in one subject is easily available. The prime motivation for getting access to the internet and getting online for searchers is educational. The computer and the internet are seen as tools of education. In addition, current information of topical interest is accessible online and there was a sense of 'keeping up with the Joneses'.

Jenny Marlon (female, 37: cleaner) is a typical searcher. She explains that the internet allows her to: '... look at stuff, to find out information, to find out things like, for the kids to learn things or for them to find out that at a touch of a button they can .... To realise that this small thing (touches the PC) can get to other countries and it's in my home.'

However, Jenny goes further to explain what the internet means personally to her: 'For me it's for learning. Learning to better myself. From the internet as well as the PC. Studying,

doing the courses with yourself, I have no education, I left school when I was 14 or 15. I want this. Like even sometimes when I'm down there and I can't spell stuff and I'm trying to do this. It's to better myself.'

This quote highlights the added benefit of having the technology in the home. More than being just a tool for the children to better their prospects for future employment, the technology has had an effect on Jenny's life in terms of her own personal development and learning. She states clearly that she wanted this. The technology is as much for her education as it is for her children's education. She speaks of bettering herself by making use of the technology, doing computer courses and using the internet to find out specific things. Her conceptualisation of the technology has been framed by the fact that her education is limited. Having left school relatively early as a 15-year-old, Jenny sees knowledge of the ICT as a medium for improving her employability. Therefore, she regards the computer as a tool – a tool for office work and an information retrieval tool.

The communication function is not as attractive to searchers for a variety of reasons. One important reason is the lack of networks of acquaintances with email addresses. This can be a major barrier to seeing the web as anything other than a tool for information research.

### *Workers*

Workers frame the technology as a work tool that has both information searching and communicative features. It functions as a tool or aid to assist work practices. The research aspect of the technology is used to further workers' interest in subjects or topics pertaining to their work. Workers were generally from the teaching or academic professions. Even email was seen as a useful tool for workers mainly in the context of work practices.

Workers surfed the web mostly for items relating to work, seldom for personal or rec-

reaction purposes. This group works with computers on a daily basis; therefore, their propensity to use the computer for leisure is constrained by the work environment, although they do share the characteristic with other profiles.

John Keller (male, 57: college lecturer) was a worker. His reasons for purchasing the technology are characteristic of this category. He explains: 'I read a book, *Future Shock* ... and I didn't want to suffer from it. I decided in my line of business it wasn't optional ... and anybody who didn't go with it was illiterate.'

John sees access and competency in the technology as an absolute necessity. His use and consumption patterns are shaped by his conceptualisation of the technology as a work tool, which can be seen in his assertion: 'I don't bother browsing the web anymore .... I would browse a couple of newsgroups but they are only general ... it's a bit tedious to browse the web ... for me, it's a tool for work ... email is a convenience, most of what I do in messages is email with attachments ... the computer for work is absolutely essential ... the internet is a very convenient library.'

Donal O'Donnell (male, 30: teacher) regards the technology in the same manner: 'I suppose, it's a multifunctional device, I suppose. It's a tool for working on things for school – creating documents or whatever. I would use it for research, some people would use it as an entertainment centre for playing games, but I don't. I'm not a gamer the way a lot of other people are, so, I suppose it is more of a device than anything else ... log on and find specific information.'

Nicky Loughlan (male, 24: web designer) makes a similar assertion: 'Research ... is the main reason for me. I have to learn about new pieces of software, I have to write tutorials out so I have to check what other people have written on it and work it out from there on what I want to write about it.'

Mary McDonald (female, 22: new media manager) supports this interpretation of the

internet. She explains: ' ... everything I do would be, well it wouldn't be just work-related, it would be project- or college-related ... I guess you would use the internet for leisure sometimes too, I would associated it with work or college ... it would be 90% more to do with work ... if I don't have to sit in front of the computer in work all day I would probably look at it differently.'

Considering the responses, it is clear to see how workers conceptualise the technology and how their interpretation is well defined. There are elements of talkers and searchers in workers, especially in Nicky Loughlan's case, because of his use of the medium for communication purposes. However, when asked to define what the technology means to him, Nicky's response places him firmly in the worker category.

### *Dismissers*

The name of this group suggests their general approach to the internet as a technology or tool only. Dismissers are characterised by a lack of interest, education and technological competence to become comfortable users of the technology. Although some members of other categories have characteristics consistent with those of popularly defined excluded groups such as 'laggards' and 'late adopters', the characteristics of dismissers are somewhat fragmented.

The reasons stated by this group concerning their 'failure to get connected' are wide and varied. This paper argues that social characteristics, such as their gender, their age, their social background and their upbringing, each exerts an influence on the process of domestication and on how the internet is interpreted and understood. It is not possible to categorise this type of non-user as a homogenous group, as each individual shapes his own relationship to the technology according to his own personal characteristics, in the same way that one cannot pinpoint one specific factor, such as age, as

being the only prohibitive factor in non-use. This article argues strongly in favour of a holistic approach to the analysis. To illustrate this approach, the following members of this group outline their personal reasons as to why they are classified as dismissers in this study.

Judith Ryan (female, 39: civil servant) works daily with computers; however, despite her basic computer competency, she has found the domestication of the technology to be problematic: 'Well, I actually use computers in work so I think I see enough of it during the day. I actually don't go near that computer at all .... I just think that I couldn't be bothered when I come home from work to start looking at a screen again.'

Her views are somewhat shaped by her use of the computer as a work tool, but she dismisses domestic internet uses because 'I could do without it, I couldn't care less, work-wise or other wise I'd rather pick up the phone'.

Judith has taken on a traditional role in the household, which, in her mind, does not include the computer. She states: 'I probably had to iron or something ... it's real life down here'. Judith makes a very interesting distinction between what constitutes 'real life' to her, and the computer and the internet are not a part of it.

For similar reasons, Reg Loughlan (male, 56: sales rep) can be classed as a dismitter. His fears about the computer are in reaction to a dislike of the technology, brought about by a deep-seated fear of it and the pace of change it forces. He explains:

I'm afraid I might do damage to that machine upstairs as well, trying to get in to the internet I might do damage so I won't touch it. I'm afraid to touch it .... I haven't a clue about the internet, so it doesn't mean a thing to me. It's very advantageous to the lads here, nothing to do with me .... I mean, I wouldn't dream of going upstairs and turning it on. I have no interest in it .... And my laptop, I was pressurised into getting it. I didn't want it because I hate them with a vengeance .... I rejected it. I didn't open it, I said "I don't want this" I didn't want it.

While the two sons regard the computer as theirs, whether it was bought for them or not, Reg regards his laptop computer as the 'company's', and not as his. Because of this forced adoption, Reg was not personally motivated to acquire the technology. Usually, the relationship between user and technology develops when the user is instrumental in initiating the incorporation of the technology into the domestic space; for example, the relationship between his son and his computer. Reg's relationship with the technology is strained and unwelcoming, because he had no choice but to accept the computer and integrate it into his work and domestic life.

The dismissers highlighted here are an illustration of the individual reasons influencing the non-use of the internet at home. Generally, a mixture of fear and disinterest shapes dismissers' attitude to the internet. It is not sufficient to merely label dismissers as laggards or as problematic cases about whom something needs to be done. As we can see here, the dismissers in my study have perfectly valid reasons for not wanting to appropriate the technology into their everyday lives. It is flawed to conceptualise dismissers as lagging behind in adoption trends, as deeper sociological issues are at the root of their relationship with the technology.

## Technology adoption

Building on what we have seen emerge above, a number of models and concepts have been developed to account for how technologies become a part of everyday life and to predict user acceptance. These theoretical concepts range from linear deterministic treatments (for instance, Rogers' (1995) S-Curve/Technology Diffusion Model or Davis' (1989) Technological Acceptance Model (TAM) to more user-focused adoption and use research – I-methodology and Domestication of technology (Rommes et al. 1999; Silverstone and Hirsch 1992; Silverstone 1994; Haddon and Silverstone 1995;

Berker et al. 2005; Haddon 2006) and cultural appropriation of technology (Miller and Slater 2000).

My key argument in this article is that technologies are socially shaped and adoption and use are social processes. Kopytoff (1986) developed an understanding of the 'cultural biography of things', which essentially seeks to explain how the meaning and value of artefacts, such as technology, are negotiated and re-negotiated over time. This approach is useful to incorporate into the wider understanding of how technologies become a part of everyday life, as it is crucial to accept that the meanings technologies hold do not remain constant but, rather, are fluid and temporary. The models such as TAM or the technology diffusion model do not allow for the re-negotiation of meanings and therefore are too limited in scope for this study; users re-design the functions and meaning of the technology to fit it into the confines of their everyday life (Hynes and Richardson 2009).

The empirical data demonstrate that individuals shape their own personal relationship with the artefact. As a result, a more nuanced theoretical model is required, one that considers the socio-cultural contexts of adoption. By applying the domestication of the technology model (Silverstone et al. 1989, 1992; Silverstone 1994), it is possible to analyse the discrete phases of the process through which technologies become a part of everyday life. It is important to look further than mere adoption theories and quantitative research models to catch how the temporal, spatial and practical expressions of use are constructed and negotiated.

The Domestication concept<sup>2</sup> offers an alternative to the models mentioned above. Domestication, essentially, is about giving technology a place in everyday life. The concept catches the practical, temporal, spatial place, but most importantly, it underlines how this is mixed with the cultural as an expression of lifestyles and values. Domestication, both as a metaphor and as an analytical concept, is used to find

the crossover where technologies and people adjust to each other and find (or do not find) a way to co-exist. Central to this process is the attempt to make technologies fit into their surroundings in a way that makes them invisible or taken for granted. This requires mutual adjustment on behalf of both the users and the technology, and is where social shaping comes into play. In essence, the person shapes the technology to fit into his or her life.

The incorporation of ICTs into household activities and routines, and thus into the social organisation of the household, shapes and may change the everyday life of these households. At the same time, there is a clear impact of the technologies on households themselves; patterns of ICT acceptance, use and meaning construction are shaped by the way people have organised their everyday lives.

Silverstone and Hirsch (1992) stress how meanings of ICTs in formal and public life are actively transformed and translated through negotiations in the practices of everyday life in households. This engagement involves the appropriation of these commodities into domestic culture – they are domesticated – and, through that appropriation, they are incorporated and re-defined in different terms, in accordance with the household's own values and interests (1992: 16).

The implementation of technology in the household is seen by Silverstone et al. (1989) as a transactional system in which the moral economy<sup>3</sup> of the household is expressed. Meanings are seen as symbolic currencies that must be exchanged within a larger cultural universe. Drawing on images from economic exchange, moral economy is a way of accounting for values and symbols. This takes place in a negotiation process; the negotiation of meanings and values between ICTs and the moral economy of the household.

Four aspects or 'non-discrete elements' may be identified to describe and analyse this system where the moral economy plays a central role: appropriation, objectification, incorpo-

ration and conversion. In the appropriation phase, possession and ownership are central. The acquisition of the technology is the main activity or concern. A technology gets appropriated when it is sold and then owned or possessed by a household. That is the point at which a commodity crosses the threshold between public and private, beginning its new life as a domestic object. Objectification tries to capture how values, tastes or styles are expressed through the display of the new technology. It involves both a spatial aspect (where it is placed in the house) and a temporal aspect (how it is fitted in the time structure). However, the spatial aspect is more central in this phase, '... physical artefacts, in their arrangement and display, as well as ... in the creation of the environment for their display, provide an objectification of the values, the aesthetic and ... cognitive universe, of those who feel comfortable or identify with them' (Silverstone and Hirsch 1992: 22–23). The incorporation phase emphasises how ICTs are used, and the temporal aspect is more central in the incorporation phase. Silverstone et al. (1992) suggest that for an artefact to be incorporated, it has to be actively used, such as in the performance of a task. The conversion phase is concerned with the relations between the household's internal affairs and the public domain or outside world.

Throughout, the users play a role in how the technology is adopted, not only into the household as a physical space but also into the everyday routines of the household members and their perception of the technologies. The overall process is not a linear or closed one. Re-negotiations are common and assessments and uses can change over time.

## Conclusions

In many ways and in many academic fields, domestic everyday computer users are presented as 'end-users' with a pre-determined

and pre-defined relationship with technological artefacts. The key argument presented here is that individuals design their own socio-techno relationship. By using the Domestication of Technology concept, we get to move beyond narrow interpretations of users. We get a valuable theoretical and analytical tool to unpack the phases through which users and artefacts progress as the computer becomes a part of everyday life, and map how meanings are assigned.

This article illustrates key phases of the Domestication process and provides concrete examples of how individual domestic internet users (or non-users) engaged and interacted with their technology in their everyday life. As the empirical evidence shows, domestic users and artefacts engage in a process of mutual co-construction of identities and relations. Technologies find their place in everyday life, routines and habits according to the individual's personal characteristics, wishes and desires, which are set within socio-cultural contexts. Tracing the process of domestication helps to illustrate why some individuals accept certain artefacts and why others have problematic relationships with technologies. What is also evident, based on the empirical evidence, is that technologies are still open to negotiation even after adoption. Users have a lot of work to do to render the technology useful and meaningful to them. It can be argued that technologies diffuse with preferred meanings incorporated in them by manufacturers and designers, but those meanings are re-negotiated by users and are in constant flux. Domestication is not a fixed process but, rather like the meanings of technologies, is a perpetual process.

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## Notes

1. Redeeming in this sense refers to the notion that the mere possession of a computer (internet) will increase the life-chances of the individual and family, compensate for low levels of education and go some way to improve the educational performances of their children. Similar findings were also reported in Rommes (2003).
2. Two major strands of domestication literature can be detected – the UK strand (Silverstone et al. 1989; Silverstone and Hirsch 1992; Silverstone 1994) and the Norwegian strand (Lie and Sørensen 1996). The emphasis on the Silverstone model, in this paper, is due to the fact that Silverstone and his collaborators focused their version of domestication within the household setting and on media technologies, while Sørensen and his collaborators widened their interest in domestication to contexts outside of the home and on other technologies, such as the car and smart-houses.
3. Moral economy refers more explicitly to ‘... these families’ own way of working with the social, economic and technological opportunities which frame their world, and which depend on, contribute to and sometimes compromise the ongoing structural forces for change which can be observed and analysed on a macro-sociological scale’ (Silverstone et al. 1989: 1–2).

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