Online Research @ Cardiff

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: http://orca.cf.ac.uk/86922/

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Molesworth, Mike, Watkins, Rebecca D. and Denegri-Knott, Janice 2016. Possession work on hosted digital consumption objects as consumer ensnarement. Journal of the Association for Consumer Research 1 (2) , pp. 246-261. 10.1086/685474 file

Publishers page: http://dx.doi.org/10.1086/685474 <http://dx.doi.org/10.1086/685474>

Please note:
Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See http://orca.cf.ac.uk/policies.html for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.

information services
gwasanaethau gwybodaeth

Possession Work on Hosted Digital Consumption Objects as Consumer Ensnarement

Mike Molesworth, University of Southampton

Rebecca Watkins, Cardiff University

Janice Denegri-Knott, Bournemouth University

Abstract

This paper extends prior critical discussions of digital prosumption by demonstrating that prosumer reliant online business models represent new ways to valorise consumer labour through the creation of digital consumption objects (DCOs) that are simultaneously enacted as assets by companies, and as possessions by consumers. We argue that this multiplicity means that consumers' 'possession work' no longer serves to separate these objects from the market sphere, as proposed in prior literature. This produces a new form of consumer lock-in as consumers' efforts to singularise DCOs ensnare them within market relations. We compare consumer ensnarement to other forms of lock-in mechanisms including psychological attachments seen in 'brand love', proprietary tie-ins, and access-based market systems in order to consider the implications of such ensnarement mechanisms. We propose that whilst for companies' ensnarement is as an attractive mechanism for on-going valorisation of consumers' 'free labour', it presents significant consequences for ensnared consumers who may be subject not only to on-going financial exploitation but also to restricted and unstable interactions with digital possessions that may hold significant personal meaning.

Introduction

Alongside the material consumption objects that have long dominated consumer research we have witnessed the emergence of digital consumption objects (DCOs) which possess no enduring material substance, but rather exist within computer-mediated electronic environments, accessed and consumed via devices such as computers, tablets, mobile phones and videogame consoles (see Denegri-Knott and Molesworth 2010; Watkins and Molesworth 2012; Lehdonvirta 2012; Molesworth and Denegri-Knott, 2013; Belk 2013a Watkins *forthcoming*). As the objects we call our own increasingly exist in digital form, opportunities for commercial exploitation are expanding. Although many DCOs can be regarded as digital equivalents of existing material consumption objects (e.g. books, movies and music), for other emerging DCOs, such as avatars, in-game assets, social networking profiles, bookmarks or playlists within access-based music streaming platforms, the material equivalent is less readily apparent.

Our focus in this paper is this new type of 'hosted' DCO that despite often being created in part by the consumer, are not stored locally on their own hard-drives, but rather are maintained by companies on their servers and accessed by consumers via the Internet. Hosted DCOs include avatars and in-game content within online games such as World of Warcraft and Guild Wars, photos and videos uploaded to hosting websites such as YouTube and Flickr, music playlists created on music streaming platform Spotify, as well as profiles created on social networking websites such as Facebook, Twitter and Instagram. Such hosted DCOs are increasingly commonplace. For example, within the video gaming sector there are over 110 million PlayStation network users, 65 Million Steam users and 48 million Xbox live accounts (Slashgear, 2013), each with an account holding numerous DCOs. On average consumers also upload 300 million images to Facebook (Armhurst 2012) and send 175 million 'tweets' (Mashable 2013) every day, and Spotify's 20 million subscribers have created more than 1 billion playlists to date, with over 5 million paying a monthly subscription for the service (Spotify 2013). In contrast to fully owned DCOs (for instance a digital photograph that we have taken ourselves and stored on our computer's hard-drive), hosted DCOs remain mediated by corporations since they are reliant on infrastructures and resources provided by these companies.

Their persistence is therefore dependent upon on the company's choice and ability to continue to host them (see Watkins, Denegri-Knott and Molesworth, *forthcoming*). Consequently, as we shall illustrate, hosted DCOs hold distinct consequences for both businesses and consumers.

Prior research has already indicated that DCOs more broadly can become personally meaningful possessions that are highly valued by consumers, documenting the transformation of digital commodities into meaningful possessions (Denegri-Knott, Watkins and Wood 2012; Watkins and Molesworth 2012), teenagers' and young adults' relationships with treasured digital possessions (Odom, Zimmerman and Forlizzi 2011; Bales and Lindley 2013), the emergence of digital heirlooms (Kirk and Banks 2002; Banks Kirk and Sellen 2012; Odom et al. 2012) and consumers' practices of archiving cherished DCOs (Kirk and Sellen 2010).

Personally meaningful hosted DCOs also play an important role in the success of the digital economy. Facebook's popularity is in a large part based on the loyalty its users attach to the content and contacts they have curated through its pages (Casadesus-Masanell and Ricart 2011; Keen and Williams 2013). Likewise loyalty to videogame platforms can be attributed to in-game achievements associated with users' accounts (Castronova 2008; Moon et al. 2013*)*. Here hosted DCOs do not only retain commodity *meanings* (see Diamond et al. 2009) or *latent* exchange value (Kopytoff, 1986), but continue to remain as assets for the companies that host them and are exploited as such. We argue that due to this multiplicity - the simultaneous enactment of DCOs as possessions by consumers and as assets by companies - consumers' own possession work (the efforts invested in making these DCOs meaningful) potentially entangles them in on-going commercial relationships, a mechanism that may be understood through comparisons with existing tie-in systems including psychological and technological (proprietary) processes. In developing this argument we contribute to an understanding of the possession of DCOs with three distinct conceptual contributions.

Firstly, we extend the scope of studies on possession in situations of 'non-ownership' or 'access-based' consumption (Belk 2013a; 2013b; Bardhi, Eckhardt & Arnould 2012; Chen 2010), complementing the language of mediation with that of networks. Borrowing from ideas within actor-network theory (ANT) (Latour 1993; 2005) we argue that hosted DCOs can be enacted in different networks simultaneously, producing multiple ontologies whereby they simultaneously exist as

companies' assets and consumers' possessions. Building on Diamond et al.'s (2014) recent observation that commodity laden meaning persist in possession, we show how beyond the fortitude of brand meanings in possession, hosted DCOs are concurrently assets and possession upon which corporations hold an on-going capacity to act.

Secondly, in dealing with hosted DCOs as concurrently personal possession and corporate asset we introduce the term 'possession work' to account for the range of company reliant processes that consumers engage in order to enact DCOs as possessions that are also a source of valorisation for corporations. More specifically, we extend existing understandings of possession by arguing that processes that are elsewhere understood to separate consumption objects from the market by singularising commodities (Appadurai 1986; Kopytoff 1986) or to sacralising mundane consumption objects (Belk et al. 1989) may, in the context of hosted DCOs, serve to tie the co-creators of the items into the market. That is, singularisation does not fully transition commodities into the sphere of possession and culture (Appadurai 1986; Kopytoff 1986) when the possession work needed to form and maintain attachments to these consumption objects is hosted and facilitated by the market.

Finally, we propose that these multiple ontologies of hosted DCOs may produce a phenomenon of consumer ensnarement as consumers become increasingly attached to objects that cannot be separated from company influence, and we compare this to other systems of market tie-in. In doing so this paper extends existing critiques of digital prosumption (Cova and Dalli 2009; Zwick, Bonsu and Darmody2008; Bonsu and Darmody 2008) by arguing that consumers ensnared by their own possession work may be subject to financial exploitation and to restricted and unstable relations to 'their' digital possessions. We therefore also add to a growing body of work which presents critical reflections on emerging business models within digital markets.

We start by considering the historical trajectory of commodity form that leads to DCOs, then illustrate the ways in which possession work stems from hosted DCOs' ontological multiplicity, then discuss the processes of consumer ensnarement via possession work on hosted DCOs, and finally we explore implications for businesses and for consumers.

Prosumption and Digital Consumption Objects in Context

The critique developed within this paper may be seen as part of a long and well-documented history of innovation in commodity form and labour exploitation. Whilst early capitalism focused on the role of efficient production in creating surplus exchange value, the emergence of consumption dominated consumer capitalism, consumer culture (Featherstone 1991; Slater 1997) or consumer society (Baudrillard 1998 [1970]) has led to discussions of value co-construction whereby production and consumption are performed simultaneously as consumers are 'put to work' (Zwick, Bonsu, Darmody 2008), most recently via digital media (Scholz, 2013). We can look at this in two ways: the changing nature of consumption objects, and the issue of exploitation of labour in their production. Together we might also see such a trend as an increasing movement towards a commodification of the self and therefore as a characteristic of what Bauman refers to as liquid modernity (for example see Bauman 2001; 2007), especially as consumers now work on themselves through social media (Bauman and Lyon 2013). This is therefore not simply a market innovation, but also has a social consequence.

First we consider the commodity form. Early in our consumer culture it became apparent that merely satisfying material needs risked the possibility of stagnation as consumers' needs became met with ever-greater efficiency of production, captured in the idea of Fordism. Lee (1993) explains how it became desirable to move to Post-Fordist experiential commodity forms, including software that may be perpetually purchased and used up in consumption. Even before the current wave of online games and social media Kline et al. (2003) also noted the potential for digital commodities (videogames) to represent an ideal commodity type for our era, as they expire in use and must be endlessly renewed and replaced (although an emphasis in their work is the exploitation of cheap labour in the East in their production, rather than consumer labour). As a fashion system for our digital age videogames, once played and completed, are discarded in favour of the next release. A further development - and our focus - is a digital commodity form that is at least partly made by its own consumers, (who offer their labour for free), but also and crucially for markets, remains as a corporate asset that can be valorised (used by corporations to make money) in various ways. Again, Bauman (2007) in particular has noted that in contemporary consumer culture, the consumer has become a commodity to be endlessly worked on, but such critical commentary may also be seen as

early as Marcuse (1965) in this discussion of the dedifferentiation of leisure and labour where both support markets.

Secondly, we might therefore note that companies have long benefited from consumer work and not just paid labour, with McDonald's patrons temporarily becoming unpaid waiters, and supermarket customers becoming voluntary cashiers (Ritzer 2004). From a company's perspective the use of consumers' labour is an attractive proposition as whilst low-paid workers produce high surplus value, prosumers' free labour generates nothing but this (Ritzer and Jurgenson 2010). The exploitation of immaterial labour activity that 'produces the informational and cultural content of the commodity' (Lazzarato 1996, p.133) to enhance the cultural and affective value of brands (see Arvidsson 2005) may be even more attractive as the physical resources required in production and distribution are further reduced. Through technology companies are therefore establishing new ways to extract value from such free labour (Terranova 2000; Bonsu and Darmody 2008; Ritzer and Jurgenson 2010). For example, Cohen (2008) considers how data uploaded to Facebook enables valorisation via surveillance and advertising revenue, whilst Bonsu and Darmody (2008) document how the owners of Second Life profit from consumers' creative input to the platform. In contemporary social media and online games, consumers help to construct consumption objects for each other, and these objects demand further work from those involved to continue the game or social activity. For example, Facebook users must constantly upload and share new messages, pictures and articles to maintain the interest of other users; a player of an online game must constantly work on their avatar to keep pace with new tasks, challenges and quests. We may therefore understand DCOs as part of a historical trajectory in capitalism where the need to maintain growth and capital flows from consumers to corporations is pressing and results in innovation in the form of the exploitation of consumers' own labour.

The sorts of business models (social media, massive-multiplayer online games, and content-sharing sites) that have emerged to support and encourage such activity were initially presented within marketing scholarship as providing a resource for 'prosumers' to work with in order to create 'mutually beneficial value' (Prahalad and Ramaswamy 2000; Tapscott and Williams 2006), with the consumer apparently in a new position of control over the manufacture of value (Vargo and Lusch

2004; Tapscott and Williams 2006). Such practices have even been considered as the pinnacle of customer-centric marketing (Sheth, Sisodia and Sharma 2000), empowering consumers and creating democratised spaces of joyful collaboration in order to engage resourceful consumers (Pine and Gilmore 1999; Prahalad and Ramaswamy 2004; Vargo and Lusch 2004). The popularity of these sites, the fact that they are apparently free to use, and the enthusiasm for them from investors all seems to attest to a new type of market where value can be produced through collaboration between users and the corporations that serve them (or that they work for, depending on your perspective).

However, this celebratory discourse of co-construction might also be seen to hide the manner in which work is done and by whom, and also the consequences for something that has been at the heart of consumer culture for some time: the relationship between consumers, objects and markets. Previous work (for example, Terranova 2000; Arvidsson 2005; Zwick, Bonsu and Darmody, 2008; Cova and Dalli 2009; Banks and Deuze, 2009; Scholz, 2013) has done much to open up this critical area, dealing broadly with the concept of 'free' or 'immaterial' labour. User-generated content becomes part of a system where labour that is outside the factory and therefore the direct control of companies is seen as a source of revenue for companies but therefore also as a form of exploitation. Although users give their labour freely, and certainly receive a variety of non-financial benefits, they lose control of their content that is then used by the company to make money. This raises questions about the fairness of such an exchange, but also highlights how capital explores ways to extract value from the 'social factory', or an 'ethical surplus' in all the work that people do for corporations that they are not directly paid for.

In this paper we wish to add to the latter commentary of co-creation movements as "a veneer of consumer empowerment in a world where market power, in large measure, still resides in capital" (Bonsu and Darmody 2008, p.355), such that business models reliant on the valorisation of consumers' extensive 'immaterial labour' have become central to post-Fordist capitalism (Lazzarato 1996; Hardt and Negri 2000, 2004). We extend such work by highlighting the multiplicity of hosted DCOs that may result in simultaneous enactments of these items as assets by companies and possessions by consumers, producing a phenomenon that we term 'consumer ensnarement'.

Ontological Multiplicity and Possession Work

Possessions and commodities are generally dealt with as discrete concepts within consumer research. Commodities are usually defined in quantitative terms in relation to their exchange value or exchangeability with other commodities (Appadurai 1986) and therefore associated with production. The singular possession, on the other hand, is defined instead in qualitative terms by its relationship to cultural categories (Kopytoff 1986) and personal histories (Belk et al. 1989; Richins 1994). Kopytoff (1986, p.75) further clarifies this distinction by describing commodities as being 'comparable', "having something in common with a large number of exchangeable things" in opposition to a singular possession that is "uncommon, incomparable, unique, singular and therefore not exchangeable with anything else." Moving a commodity from the homogenising market sphere into the domain of personal possession requires self-investment (Belk et al. 1989; McCracken 1988; Richins, 1994; Wallendorf and Arnould 1988), including work on meanings that attach an object to a time, place or other person (Csíkszentmihályi and Rochberg-Halton, 1981), and work on customising, cleaning, repairing, displaying and maintaining the preferential status of a sacred possession (Belk et al. 1989). Thus the emotional bonding or attachment between consumers and their possessions is produced as a result of on-going sacralisation as described by Belk et al. (1989), reflexive cultivation of psychological resources to achieve goals via the harnessing and mastery of objects (Csíkszentmihályi and Rochberg-Halton 1981) or their incorporation in personal and family identity projects (Belk 1988; Csíkszentmihályi and Rochberg-Halton, 1981; Epp and Price 2010).

However, the two states (commodity and possession) are not terminal or mutually exclusive. Kopytoff (1986) has acknowledged that possessions may continue to hold l*atent* exchange meanings that may be reactivated where items are recommoditised and returned to commodity spheres. More recently Diamond et al. (2009) have argued that branded objects may concurrently contain commodity *and* possession-based meanings; based on a case study of the American Girl doll brand, they question the divide between market and culture identified in other work, illustrating that commoditised meanings are persistent even when dolls had been singularised. Thus they may simultaneously hold both public meanings, which may include commodity meanings that signal their exchange value, and personal meanings (Richins 1994). Yet these observations are rooted in discussions of material

consumption objects that have a singular form and reside in just one spatiotemporal location. The figurine that is both a toy to a child and prized collectible to an adult (Belk *et al.*, 1991) is in this sense singular, even when commodity-laden and private meanings associated to it remain multiple and fluid. However, as Watkins (*forthcoming*) observes for hosted DCOs, adherence to this ontology becomes problematic in the context of DCOs that can be concurrently present in various locations, on different devices, in different forms, and in relation to companies and consumers, often simultaneously. We draw from ideas within the actor-network theory (ANT) tradition to sensitise ourselves to such multiplicity, in particular the recognition that ANT suggests that realities may be multiple (Mol 1999; Law 2004). As Mol (1999) notes, ANT's acknowledgement of ontological multiplicity is opposed to both perspectivalism, which sees multiple perspectives on a singular reality, and constructivism, which notes that alternative realities may have been possible at one point, but have now disappeared. Rather, ANT follows the assumption that multiple realities can be enacted *simultaneously*. In other words, we are not simply looking at different aspects of a single reality, but at multiple forms of reality.

We observe this ontological multiplicity in the context of hosted DCOs which, even when highly treasured possessions, remain present in the networks of companies who enact them as digital assets and who retain the ability to act upon and change them. From a company's perspective the creation of DCOs may not be a process of individual possession, but rather the production of content that may be valorised. Our Facebook profile may become an important possession where we have invested work in cultivating meaning over many years, and yet it cannot be separated from the influence of Facebook itself who continues to profit from the collective actions of its many users. Thus hosted DCOs are not removed from the market even when experienced by the consumer as singular. It is not that they just retain commodity meanings (see Diamond, et al, 2009), but that whilst possessed by individuals they are simultaneously commodities that are owned by corporations and therefore objects of exchange value. Such multiplicity is typically achieved via contractual agreements that enable companies to retain a level of ownership, which in turn may be enforced by surveillance and by digital rights management (DRM) techniques (Watkins, Denegri-Knott and Molesworth, *forthcoming*). Indeed such a system requires extensive commercial surveillance of even

the most mundane activity in order to extract value and manage behaviour (see Lyon, 2013). In sum, through their entanglement in software, Internet infrastructures and contractual agreements, hosted DCOs retain an enduring presence in the market that consumers cannot sever.

That hosted DCOs may continue to be assets even once possessed challenges the way in which we understand consumers' attempts to possess and 'singularise'. Prior research demonstrates that consumers do indeed attempt to do so in the context of DCOs, despite the challenges and obstacles presented by their digital form. Activities relating to possession might normally bestow objects with a singularility which, as McCracken (1988) claims, provides a visual proof of the symbolic property of an object. The dents, chips and signs of wear contribute to a possessed item's uniqueness which is difficult to fake or duplicate and that bind an object to a personal biography. But what would this mean in the case of DCOs? Clearly they cannot carry such history with them as physical marks. Although DCOs can develop a sort of digital patina in the form of metadata that may describe their authors, modifications made, and previous use (Odom et al. 2011) that might render them singular, this metadata may also be removed or duplicated (indeed, many identical copies of a DCO can be easily created, and identifying the 'original' may be difficult). Hence the concept of an irreplaceable, singular possession becomes problematised. Despite this, Watkins and Molesworth (2012) found that whilst exact replicas of DCOs within videogames could easily be produced, their participants explained that as *they* would know that such duplicates did not have the same history as their treasured digital virtual possessions, they would be rejected.

Thus in the case of DCOs singularity of possession may be maintained in the mind of the owner, and in this respect we might recognise a reversal of how agency has come to be distributed between humans and machines (for example see Denegri-Knott and Molesworth's analysis of wish lists, 2013), and even our understanding of how material objects carry agency in this regard (Epp and Price, 2010). Unlike material goods, the singularity of DCOs is not found in physical patina, but rather maintained in 'mental patina' - in the self - as the accumulation of memories of when DCOs were first acquired, crafted or used and which are evoked each time the object is assembled regardless of hardware involved (Denegri-Knott et al. 2012; Watkins and Molesworth 2012). Participants' stories of 'my first avatar', 'the armour my friend gave to me or 'the car I created with my girlfriend'

illustrate how the process of associating memories with particular DCOs distinguishes them even from an exact digital duplicate (Watkins and Molesworth 2012). Hence, their possession requires on-going cultivation beyond initial possession rituals that necessitate that consumers engage in or recreate the on going association of DCOs with specific individuals, times or experiences in order to experience them as singular (Watkins and Molesworth 2012). In effect, consumers must remain diligent to the maintenance of their digital possessions once constructed and in this effort, and unlike the similar effort that is acknowledged to make material goods possessions, there is value creation for the corporation.

We can refer to this activity collectively as 'possession work' - the physical and especially psychological resources that consumers invest in transforming commodities into possessions and maintaining them as such, and which may also be the basis for new forms of valorisation by corporations. Although these processes can, and indeed must be experienced as enjoyable, playful activity, akin to the sorts of ludic agency described by Kozinets et al (2004) in their study of the ESPN Zone retail space, in this paper we use the term 'work' since it highlights the potential *productive* aspects of the activity, and as labour, the fact that such production creates exchange value that is alienated from those that produce it. To define such activity as ludic or playful risks obscuring the potential exploitation that we seek to foreground. Again, however, this is not to suggest that such activity cannot be 'fun'. We are not refering the phenomenological experience of individuals playing online games or maintaining social networking profiles. Indeed, as Fuchs and Sevignani (2013, p.288) point out, using social media "does not tend to feel like exploitation because digital labour is play labour that hides the reality of exploitation behind the fun of connecting with and meeting other users.". Similarly we might consider Kucklich's (2005) idea of 'playbour', where the creative and playful activities of videogame modders produce exchange value for game producers. Perhaps more significantly we might also acknowledge Kirk et als (2015) claim that the sort of self-design invited by DCOs leads to authentic feels of pride associated with psychological ownership. In employing the terminology of work and exploitation we are not dismissing positive individual emotions generated by these activities, but rather we are accepting that, play, despite considerable ambiguity in its definition (see Sutton-Smith, 1997) must be considered outside of external concerns (Huizinga 1938), and is

therefore corrupted when attached to instrumental goals such as the generation of exchange value (Caillois 1958). Like audience work (see Fuchs 2010) that captures how watching media creates value, possession work is defined as activities relating to making and maintaining objects as 'mine', as possessions, that also creates alienated exchange value. In the following sections we consider how such possession work on hosted DCOs serves to tie consumers into the market, presenting a new consumer tie-in mechanism that we term 'consumer ensnarement'.

Hosted DCOs and Consumer Ensnarement as a Tie-In Mechanism

Competitive environments have resulted in marketers devising complex, often technologically enabled, ways to maximise the exchange value generated by a customer base, ideally by evading competition. We now review the characteristics of established approaches and how they might relate to hosted DCOs, presenting consumer ensnarement via possession work as a new mechanism that appears to combine various existing approaches as an 'ideal' form of consumer tie-in. Our argument is that in their multiplicity DCOs seem to present a new, and potentially highly effective means of tying consumers into the market, and especially to one corporation, based on the permanent deferral of legal ownership, (i.e., on maintaining at least some aspect of a DCO in the corporation's network of assets), whilst encouraging further possession work (i.e., allowing the DCO to enter the consumers' network of possession) that we have identified above and that is also noted as troubling by Hulland, Thompson and Smith, (2015). We contrast this with other market mechanisms that attempt to tie consumers into market systems, highlighting the attractiveness of this new mechanism for corporations.

Firstly, let us consider psychological loyalty to a brand or at its most powerful, 'brand love', and its powerful effect of attachment in the market. Empirical insights into brand love (Batra, Ahuvia and Bagozzi 2012; Fournier 1998; Park et al. 2010) illustrate the formation of emotional attachment that requires continuous and intensive engagement with brands (Fournier 1998; Park et al. 2010). That engagement often requires market mediation of sorts - for instance, a consumer who loves her Apple iPad opts for other Apple products and services in further cultivating her relationship with her treasured device. Where there is brand love, continuous and meaningful mental and physical

engagement is required (Fournier 1998; Park et al. 2010) which is akin to that described in the literature on meaningful, sacred possession (Belk et al. 1989). In the case of customer loyalty more broadly (Liu, 2007) customers feel sufficient attachment to a brand that they continue to buy it and this idea underpins much of the marketing literature on branding and therefore considerable marketing effort (see Anderson and Mittal 2000; Morgan and Rego 2006; Liu 2007). Brand love in particular frames the objectual relations between brands and consumers as intense and emotionally committed to the point that separation may cause significant distress and heartbreak (Bhatra, Ahuvia and Bagozzi 2012). This produces a peculiar conflation between singularising activity and market serving outcomes as when consumers are emotionally bound to their brands they are more likely to engage in positive word of mouth (Bhatra et al. 2006; Carrol and Ahuvia 2006; Thomas, MacInnis and Park 2005), forgive brand failures (Bauer, Heinrich and Albrecht 2009) and pay a price premium (Thomson, MacInnis, and Park 2005). Brand love itself, as described by Bhatra et al. (2006) requires 'passion driven behavior' which demands investment in branded product complements and accessories, as well as servicing and upgrading. Emotional attachment is positioned as a tie-in mechanism and we can also see this in DCOs. Premium brands benefit from consumers' work on the brand that makes it more attractive to others. So when consumers work on desirable commodities, they increase the exchange value, but also the claims for exploitation. For example we witness a form of ' double exploitation' (Zwick et al. 2008) where fashionable clothes that are presented by consumers in public, increase their desirability, and lead to higher prices. Consumers pay a premium for their own labour in making such goods attractive. Yet consumers at least retain ownership of these items and benefit from the strong resale values of the goods they buy. The manoeuvre with DCOs is that the 'brand' that is 'loved' is in part the consumer himself or herself as a commodity (see Bauman 2007). Consumers' attachment to their own self, captured though their online activity, is what keeps them using the online platform.

Another long-standing mechanism used to retain and profit from consumers is through loyalty schemes that reward continued patronage with points, prizes and money-off offers or vouchers (Liu 2007; Zhang and Breugelmans 2012). Liu (2007) for instance concludes that loyalty programs increase purchasing from low patronage consumers. Other studies conclude that reward-based loyalty

programmes tie new customers into repeat purchasing and increase patronage from existing customers (Evanschitzky et al. 2012; Meyer-Waarden and Benavent 2006), lower price sensitivity (Guadagni and Little 2008), increase price levels for brands (Chaudhuri and Holbrook 2001) and increase sales revenue (Meyer-Waarden and Benavent 2006; Zhang and Breugelmans 2012). Yet cast with a critical eye, as does Beckett (2011) in his study of a loyalty card in a leading UK supermarket, loyalty programs can also be seen as tantamount to means of governing consumers' purchasing behaviour via continuous surveillance and through carefully incentivised schemes. Loyalty schemes themselves become objects of consumption as individuals collect and possess points, vouchers and offers that can only be used with the loyalty platform provider. Here then we see a tie-in based on a proprietary platform that consumers 'want' to keep working on and we might also note the similarity between 'gamified' loyalty that places an emphasis on accumulated points and the micro-level structures of online games and social media that similarly emphasise scores, levels and status-based achievements (e.g. see Molesworth and Watkins *forthcoming*). This is the therefore the second mechanism at work to tie consumers to DCOs.

Other means of tying-in and profiting from customers are based on proprietary systems for consumption objects themselves (Zhu and Zhou 2011). Such systems produce a 'vendor lock in', where customers, unwilling to pay high switching costs, are forced into a continued relationship with a software or hardware provider. Customers are tied in because of inbuilt incompatibility between software and hardware manufacturers, the use of proprietary systems architecture that is inoperable with other applications, and through licensing agreements that limit use (Kucharik 2003). Printer cartridges, computer accessories, or camera lenses, for example, must be licensed from the original manufacturer and such systems may be protected through IP legislation, but actually may be enforced through code. For example, printer cartridges may require a code encrypted in a microchip and only placed in authorised goods to work. Consumers are therefore forced to continue to buy only the manufactures' or licensed products. For companies, such lock-in provides lucrative opportunities for cross-selling, increased revenue from customers and protection against competition (Amit and Zott 2001; Farrell and Klemperer 2007; Harrison et al., 2012). Again, a similar system applies to DCOs in terms of compatibility with software systems and online platforms (see Watkins, Denegri-Knott and

Molesworth *forthcoming*). For instance Apple eBooks may not be compatible with Kindle's software, whilst a World of Warcraft avatar cannot be used within another online game unless the company permits and enables this. For consumers, such systems erode freedom of choice and can diminish the quality of the experience with software and hardware (Eurich and Burtscher 2014).

These systems all encourage 'loyalty' of sorts through physical and psychological attachment to brands where ownership of objects of consumption is encouraged. More recently however, the role of market mediation in possession has been reframed through the idea of 'access-based' consumption (Bardhi et al. 2012; Bardhi and Eckhardt, 2012; Chen, 2010), and this idea is also apparent in the context of DCOs. Here consumers pay a premium to access a consumption object for a limited time and in a restricted fashion. Most obviously this applies to anything that is rented or leased, such as cars or apartments, but the model is being more widely adopted, and celebrated as liberating consumers from the burden of work required to maintain possessions (Bardhi Eckhardt and Arnould 2012; Bardhi and Eckhart 2012). For example, a Zipcar may be used only as needed, without time-consuming maintenance or cleaning and without the psychological worries of car possession (fear of damage, breakdown, or theft). However without owning the consumer must keep paying for the service and indeed may be tied in for a term of a contract (for example in car leasing).

Access-based consumption represents an apparent shift in market philosophy away from consumer possession work, the avoidance of which is now seen as a premium service (even though it may still take place in more limited forms on leased objects). Yet in the context of DCOs it seems that despite an absence of the full legal ownership typically associated with possession (see Watkins Denegri-Knott and Molesworth *forthcoming*) consumers nonetheless may come to see such items as 'mine', even as highly treasured possessions (Watkins and Molesworth 2012; Denegri-Knott Watkins and Wood 2012; Odom et al 2011). Thus the desire for attachment remains, and indeed may be encouraged, but the trick with DCO-based platforms is to encourage processes of attachment whilst also separating ownership such that sacred possessions remain only objects of access. DCOs therefore represent a combination of psychological tie-in and attachment, proprietary rewards and systems, and a separation that requires on going payment for access (see Table 1). Both access to the DCO and the possession work required to create and enact possession are therefore market mediated.

In previous research, the creation and maintenance of meaningful DCOs is performed via skilled manipulation of in-game resources (Denegri-Knott et al. 2012), facilitated by the host videogame company. The cultivation process itself cannot be severed from the market because it is hosted by it, and because the means necessary to customise a DCO, like a home in The Sims or a racing car in Forza, are embedded in the market. Singularising work thus can be said to be equally commoditising inasmuch as it fails to sever ties with the market and because consumers' emotional attachment towards DCOs makes these important assets for hosting companies. Differently put, the work done by consumers in order to create and enact possession of DCOs is 'immaterial labour', the type of work that dominates information-based economies more generally like creative, design, emotions and social interactions (for example see Scholz, 2013) and such possession work contributes significantly to both the use value (which is largely located in their meanings to users) and exchange value of hosted DCOs.

Consider also as an example social media accounts. Although the host companies provide the infrastructure within which consumers may create their profiles, own the servers on which they are hosted and pay the website developers who create and maintain the platform, the value of these websites ultimately lies in consumers' extensive possession work (without it there is no revenue for the company). It is the user who uploads and tags multiple photographs, fills out personal information, and continuously provides the up-to-date and socially valuable information that makes websites such as Facebook a success. This possession work involves an on-going investment of psychic energy seen in all possession work (Csíkszentmihályi and Rochberg-Halton 1981). Consumers' creation and cultivation of their social media platforms presents a major contribution to the use value of these objects, and thus also exchange value - the companies' revenue - as they sell advertising associated with the profile.

Where there is no possession work, the status of these consumption objects is likely to be transparently based only on access (Bardhi and Eckhardt 2012) and the financial exchange may be temporary but unproblematic (for example a Netflix or Spotify account). However, where the consumer invests considerable effort in cultivating a DCO the character of the relationship may be different and this invites us to consider the consequences of these business models upon the

possession of hosted DCOs. To put it another way, although issues of (the potential exploitation of) labour are significant for new business models, such analysis might also consider structures of meaning that may be embedded in objects. In contrast to acquired, 'mass-produced' DCOs (e.g. commercially produced movies and music), and almost all mass-produced material goods, DCOs that are created by consumers are uniquely brought into existence by consumers' labour, and immediately multiple as they simultaneously exist as an asset for the hosting organisation. The result is form of 'consumer ensnarement' where it is the consumer's own labour that keeps them in the market and prevents the separation reported for material goods.

Table 1 Market/consumer tie-in systems

System	***Examples***	**Mechanisms**	**Implications for business**	**Implications for consumers**
Psychological Loyalty/Brand Love	*Apple, luxury brands*	**Attachment to brand**, association with positive aspects of identity.	Consumer desire for latest products at premium price. Consumers work on brand to make it desirable	Potential of double exploitation. Identity work and benefit of resale value when goods divested
Proprietary Systems	*Microsoft Computers/Printers/ DSLRs/*	Limited product and service compatibility, maintained by **physical and/or software restrictions**.	Prevents unauthorised copies and ties consumer to group of products	Decision over initial platform has longer-term implications, since changing to another platform results in loss.
Offer-Based Loyalty Scheme	*Tesco Clubcard, airline frequent flyer schemes*	Small financial incentives awarded in return for continued use of service and/or surrender of data. Game-like structure. **Proprietary platform**	Value of data collected and consumers tied-in to scheme, but surrender of small part of exchange value	Small return of exchange value as payment for loyalty and data. Can stop at any time, but will lose accrued benefits. Cannot transfer to another scheme.
Access-Based Consumption	*Zip-Car, Spotify*	**Goods are never transferred to consumer**, who pays only for the access to the goods that they require	Retains ownership, and the resulting responsibilities, but receives ongoing revenue	Liberated from the need to work on possession, flexible exchange of capital for access. Going payment for service.

COMBINED IN

Co-created, Hosted DCOs	*Facebook/ online games/UGC platforms*	**Attachment to brand** through possession work. Separation of possession from ownership, which is **never transferred to consumer**. Enforced by **software restrictions** and **proprietary platform**.	Consumers work on the object they consume. Can continue to charge for access, and or value of data collected. May prevent divestment with code.	Identity work, but must continue to pay or work for corporation in order to retain access, or will lose possessions and forfeit all payments. Lack of security and control of objects in terms of sharing, or gifting

With DCOs we witness a mechanism that allows for a ‘vendor lock in' possible through proprietary systems and reward-based schemes, but which is not solely dependent on code restrictions but rather operates through emotional bonding akin to ‘brand love’. Unlike ‘brand love’, however DCOs require continuous engagement with the market in order to access their ‘own’ co-created DCOs. In providing co-created DCO hosted online like social media profiles and MMORGs companies benefit from a peculiar type of prosumption work- possession work - that produces multiple ontologies whereby a cherished digital possession is simultaneously an asset for the companies hosting them. The benefits for corporations seem clear; consumers are ensnared by their own efforts, as their identity-rich possession work remains owned by the corporation who may valorise this content even charging the consumer for access, whereby the consumer must endlessly pay for access to their own extended-self as a leased commodity. We now consider the further implications of such a system.

Consequences of Ensnarement for Consumers: Exploitation, Restriction and Instability

Prior scholarship has discussed the potential for prosumer reliant online business models to exploit consumer labour (Terranova 2000; Bonsu and Darmody 2008; Ritzer and Jurgenson 2010). However the ontological multiplicity of hosted DCOs presents further consequences for consumers that have yet to be fully recognised (also summarised in Table 1). One consequence of possession work ensnarement as a valorisation mechanism is demonstrated by Watkins and Molesworth’s (2012) study of videogamers’ digital possessions. Speaking to players of massive multiplayer online games they report instances where individuals had invested significant time and effort on DCO possession work during their teenage years, playing various online games, creating unique characters and collecting and singularising in-game content. One of their participants, for instance, described a strong emotional attachment to her first World of Warcraft avatar. Yet the avatar remains hosted by World of Warcraft provider Blizzard, enacted by the company as an asset, simply part of the service that they provide. Consequently, regardless of the avatar’s enactment by this consumer as a treasured and irreplaceable possession, we note that a link to the market sphere is retained. This can hold significant consequences for consumers. Watkins and Molesworth (2012) note that whilst some of their participants had not played the videogames they discussed for a number of years, they continued to

pay monthly subscription fees in order to preserve access to avatars and other in-game content that they themselves had largely created. Here we see evidence of the negative consequences of ensnarement as consumers invest effort in making a possession meaningful, yet are subjected to on-going financial exploitation as they must repeatedly pay subscription fees for access to it.

Comparison here might help highlight how this diverges from previous literature on similarly rich possession work in the context of material consumption objects (Campbell 2005; Watson and Shove 2008). Like the hosted DCOs discussed above which are in part produced by consumers themselves, material items may too be crafted through consumers' own labour, and research indicates that such crafting leads consumers to value these possessions highly (Campbell 2005). Let us imagine for instance the task of crafting a small wooden coffee table as a DIY project. Although the consumer may buy wood, tools and even instructions through market exchange, once constructed the table will be theirs to use as they wish. More than this, their invested labour may result in this table becoming an important possession. Indeed such crafting might be seen as very different from the alienated consumption of mass produced furniture, or even the exploited consumer labour of self-assembly goods (where consumers' labour is used rather than even the cheapest overseas factory workers, but where little craft or creativity is involved). The crafted coffee table is not simply possessed through ritual (McCracken, 1986) or through the development of meaningful associations over time (Grayson and Schulman 1990), but emerges as the product of consumers' own labour and therefore becomes an expression of their identity (Campbell 2005).

Now imagine that after laboriously crafting their new piece of furniture the consumer would be required to continually pay the logging company that supplied the wood in order to continue to use this table, and that if they refuse to pay these fees the company will restrict access. This is difficult to comprehend in the context of material objects (indeed even bought manufactured furniture would not usually be subject to an indefinite lease), yet in the context of hosted DCOs such practices are commonplace. Here companies do not only charge consumers a surplus for the products of their own labour, but the more possession work consumers invest into the cultivation of hosted DCOs the more valuable they may become to them. Under such circumstance it may become difficult to escape the market; like an animal in a snare the consumer is trapped by his or her own efforts. This is particularly

problematic where consumers are continually charged for access to the platform, as in the case of the online games mentioned above. Consumers may be forced to choose between either indefinitely paying for access to 'their' treasured possessions, or abandoning them altogether. Indeed, it is not only the game provider that must be paid to ensure access. Consumers must also continue to pay for Internet access and for the hardware (e.g. computers, monitors) needed to access DCOs. This might be equivalent to our metaphorical coffee table embroiling the consumer in on-going contracts with the logging company, tool manufacturers and even the retailer that sold the wood and tools. Again material comparisons seem ridiculous, although where we find parallels a similar concern of exploitation may also result. For example, a tenant who modifies, paints or improves their apartment, (although in the UK most lease agreement prevent all modification) must continue to pay a landlord, regardless of their expense and effort and must surrender their improvements at the end of the lease.

Unlike most leased material goods, however, online platforms provide consumers with the freedoms that enable and even actively encourage possession work; inviting consumers to transform hosted DCOs into meaningful possessions. Videogames may provide extensive customisation options or enable practices of sharing and gifting of certain in-game items that associate these items with important others (Watkins and Molesworth 2012). Similarly, Facebook provides consumers with the ability to easily post statuses and upload large numbers of photographs and videos to the platform, and also enables consumers' friends to 'comment' on this content; Odom et al (2011) find that the accumulation of metadata such as 'comments' and 'likes' can serve as 'digital patina' which makes content increasingly valued. Virtual world Second Life goes further and provides consumers with intellectual property rights to their creations within the platform, something that Bonsu and Darmody (2008) propose mobilises consumer labour via the guise of empowerment. Furthermore, we can observe instances of companies actively encouraging consumers to engage in meaningful, long-term relationships with hosted DCOs.

In 2011, for example, Google released an advertisement featuring a father sending anecdotes, photographs and videos to his daughter throughout her childhood via Google's email service, with the intention of one day reflecting on these emails together (Bazilian, 2011). Google invited users to use its email service to create treasured digital scrapbooks. Similarly in March 2015 Facebook announced

the launch of a new scrapbooking feature that enables parents to gather together photographs of their children from across the platform into one album or 'scrapbook' that can be continually added to as the child grows (Chowdrhy 2015). Thus platforms actively encourage meaningful possession work that transforms hosted DCOs into treasured digital possessions with significant personal meaning. Yet in order to successfully extract value companies also impose limits to use that are often taken for granted in the context of material possessions.

In order to effectively and continuously extract value from consumers' possession work companies impose technical (code) and legal (End-User License Agreements) boundaries around customer freedoms whilst maintaining those processes that lead to possession (see Watkins Denegri-Knott and Molesworth *forthcoming*). Such restrictions may be placed on the movement of DCOs between consumers, for instance. Much consumer research considers the movement and exchange of material goods, often facilitated by consumers who move goods from one stage of their biography to the next. For example, research has explored the significant second hand market fuelled by material goods repeatedly re-entering the commodity sphere (Gregson and Crewe 2003; Sherry 1990; Belk, Sherry and Wallendorf 1988; Lastovicka and Fernandez 2005; Denegri-Knott and Molesworth, 2009), as well as documenting the passing on of family heirlooms (Price, Arnould and Curasi 2000) and practices of giving our possessions to, and sharing them with, family and friends (Belk 2010; Tinson and Nuttall 2008). However many such practices documented lack an equivalent in the context of DCOs. Although some platforms allow limited sharing, this is determined by strict controls built into software and only where such activity benefits the platform owners (for example on Facebook sharing media creates advertising opportunities). The ability to freely transfer either accounts or individual hosted DCOs (such as in-game assets) to others, however, may be denied in services' terms and conditions (see for instance Facebook 2015; Instagram 2015; Blizzard 2014), resulting in a 'terminal commodity' (Kopytoff 1986) status that may prevent not only re-entry to the market via re-commodification by the consumer, but also acts of passing items to friends or family. Whilst it is common to pass on a treasured childhood toy to descendants, parents may be prohibited from similarly passing down a treasured avatar or gaming account to their child. World of Warcraft's current Terms of Use, for instance, state that it '*does not recognize the transfer of World of Warcraft*

Accounts […] You may not purchase, sell, gift or trade any Account' (Blizzard, 2014). Attempting to pass down a World of Warcraft avatar would breach the service's Terms of Use. As consumers accumulate cherished, personally meaningful DCOs both scholars and consumers are beginning to consider the notions of digital heirlooms and digital legacy (Carroll and Romano 2010; Odom et al 2010, 2012). However with DCOs we see that consumers may be denied the control central to our previous understanding of possession (Furby 1978; Belk 1988), granted only those freedoms favourable to the company.

Although transfer practices may frequently be forbidden, this does not necessarily mean that they do not take place. A look at popular video gaming forums reveals contributors planning to pass on their accounts to friends or family, or admitting to sharing an account with their partner, despite recognising that such actions are prohibited by contractual agreements. Yet these activities, established and normal for material goods, must breach contractual agreements such that consumers risk losing access to content, particularly given increased potential for companies' on-going surveillance of use. Thus, whereas Bardhi et al (2012) position DCOs as liberating consumers from the burdens of material possession, we draw attention to the potential restrictive aspects of them which render consumers unable to control or exploit fully the products of their own labour.

Further consequences relate to the absence of the security provided by legal ownership, potentially resulting in a tense and unstable possession. Companies such as Facebook (2015), Instagram (2015) and World of Warcraft (Blizzard 2014) stipulate in their contractual agreements that they retain the right to terminate users' accounts and thus eliminate users' rights to their profiles and the content they have uploaded and cultivated. World of Warcraft provider Blizzard, for example, retains the right to terminate accounts '*for any reason or no reason, with or without notice*' (Blizzard 2014). Termination may be due to the consumers' violation of the company's terms, but might also result from the company's collapse, or technical error. Watkins and Molesworth (2012) note that the publishers of MMOGs typically retain the right to terminate the service without notice, and in doing so eradicate consumers' achievements, avatars and in-game possessions without a trace, whilst Bonsu and Darmody (2008) note that the same is true in the case of Second Life. Thus the contractual agreements involved in such platforms places companies under no obligation to continually host the

digital consumption objects in question. Indeed platform closures have been previously documented. For instance, Scarabato, Carter-Schneider and Kedzior (2013) illustrate that in investing significant labour in Disney's adverworld 'Virtual Magic Kingdom' users developed a sense of co-ownership and an assumption of continued access, however Disney later terminated the platform (and consequently consumers' hosted content) and were within their legal rights to do so.

As a result the continued possession of DCOs is never certain. Their lack of permanence again leads us to consider how such meaningful relationships with unstable digital virtual possessions may relate to consumer identity projects. Belk (1988) notes the potential for significant 'lessening' of the self where highly appropriated possessions are lost. In the context of media or narrative brands, Russell and Schau (2014) note the trauma and loss caused by the end of a popular series (and the resistive actions that follow). Here this situation may be similar but we may consider that the brand can continue with other stories from other users, yet it is the individual consumers own narrative (own self) that is lost and must be mourned. As hosted DCOs remains reliant on the persistence of their host websites, over which the consumer has no control, the result may be tense and stressful in comparison to the possession of fully owned material goods. Again we see that consumers are granted those consumer freedoms that encourage possession work that benefits companies as immaterial labour, yet lack those rights that are traditionally associated with material possessions including permanent rights to use and access these items that provides a level of security.

Conclusions

In this paper we have built on critical discussions of digital prosumption by showing how prosumer reliant business models present new ways to valorise consumer labour through the creation of hosted DCOs that are simultaneously enacted as assets by companies and as possessions by consumers. As we have shown, while hosted DCOs result from possession work invested by consumers in making DCOs meaningful and to extend their selves online (Belk 2013a), they remain owned by corporations as assets to be valorised.

In many cases hosted DCOs are in part the product of consumers' own efforts, their unpaid labour as they work not for exchange value, but for meaning. In others, hosted DCOs emerge as gifts,

for example in the case of shared messages, photographs, and in-game assets. These are forms of exchange we would normally associate with practices that are outside the market. Crafting, sharing and gifting, at least in prior consumer research literature (e.g. Belk 2010; Campbell 2005; Sherry 1983), are typically activities where individuals give their time, knowledge and skill freely and without thought of exchange value. Yet through new business models these practices may be carefully captured and valorised. They are therefore not just the exploitation of small amounts of free labour (as with self-service shops and restaurants, or self-assembled furniture), but the skilful exploitation of efforts to produce and share private meanings; a particularly creative solution to the established Post-Fordist problem of the need to maintain growth. Rather than endlessly stimulating desire for new goods, or exploring elaborate ways to maintain share over competitors in saturated markets, corporations associated with DCOs are able to continue to both charge consumers for their own meaningful work - their own extended self - and for the technological tools and service required to access the objects created.

We have argued that this produces a new form of consumer lock-in as consumers' efforts to singularise DCOs ensnare them within market relations. In previous work there has been a tendency to separate the states of possession and commodity, and the spheres of market and culture, with consumers' possession work severing ties between an object and its market origins, including exchange value (e.g. Belk et al. 1989, Lastovika and Fernandez 2005, McCracken 1986). In this paper, however, like Diamond et al. (2009), we have seen otherwise. Hosted DCOs exhibit a multiplicity whereby rather than separating hosted DCOs from the market sphere (even where commodity meanings remains, and a re-commodification biography is possible), possession work instead produces a phenomenon of consumer ensnarement, tying consumers to DCOs that can't be separated from the company's influence. As consumers play various online games and engage with social media their work on meaning and identity is therefore owned and valorised by corporations.

Our analysis also contributes to a better understanding of complex consumer tie-in mechanisms. We see that consumer ensnarement presents a valorisation mechanism that combines characteristics of: (1) the psychological loyalty that exploits and encourages immaterial labour as consumers work on desirable goods; (2) aspects of points-based rewards (in the form of game levels,

likes and status markers in social networks, and in the use of consumer data, for example); (3) proprietary systems that prevent consumers using consumption objects on or with another corporation's products or services, and; (4) access-based systems where ownership is not transferred to the consumer and a continuous payment may be required. We might therefore recognise DCOs as something of an ideal commodity form of the web 2.0 era, enabling companies to continually profit from consumers' efforts to possess but also, as Bauman and Lyon (2013) note, to create themselves as commodities.

Our paper therefore adds to emerging critiques of 'value-co-creation' and 'service-dominant logic' perspectives (Cova and Dalli 2009; Zwick et al 2008; Bonsu and Darmody 2008) by exploring the implications of prosumer-reliant online business models on the possession of hosted DCOs. Whilst not denying that the practices involved are pleasurable (indeed they must be so), a result is an inability to escape the market where consumers must deal with the tension that arises when hosted DCOs are possessed but not legally owned. In some cases consumers may be forced to choose between either abandoning treasured digital virtual possessions or continuing to pay indefinitely for access to goods that they themselves largely created. We see how such markets not only exploit consumers' immaterial labour for financial gain, and may proceed to charge them a surplus for the fruits of their own labour, but once purchased the consumers are denied full control over the DCOs they have worked so hard to cultivate. Thus we note that with DCOs such business models have further consequences for risks and security that must be considered, again a specific aspect of the analysis of liquid modernity provided by Bauman (2007) and Bauman and Lyon, (2013). Online games and social networks seem safe and secure platforms on which to be someone – to deal with the threat of not existing (Bauman 2007) – but actually create new issues of security.

More broadly we demonstrate the significance of multiple ontologies for an understanding of consumption objects. It is through consumers' enactment of DCOs as possessions that consumer ensnarement becomes a valorisation mechanism for companies, whilst it is through the enactment of digital consumption objects as commodities or services that consumers are subjected to exploitation and to restrictions upon their possession of these objects. Thus this paper not only recognises

ontological multiplicity but also theorises ways in which multiple realities may interact and shape one another.

Our conceptual paper invites further empirical work, including detailed examples of the DCOs and related experiences that we have illustrated. In addition, as awareness of the mechanisms we describe increases, often through the service withdrawals and publicised stories of loss that we have illustrated, how might consumers respond? What types of reflections might result and how might these impact future behaviours, including resistive ones? Although our focus here is critical, we have also acknowledged the need for seduction through pleasures associated with use of online platforms. Future projects could look at possession of hosted DCOs in specific empirical contexts to provide experiential accounts of possession work; in particular to consider how incorporation of DCOs takes place, even when they produce ensnarement too. Attention then can be placed on detailing the mechanism or processes through which hosted DCOs relate to the development of the self or how they are reflected upon as meaningful possessions. Future work could also deal with tensions arising by the contradiction of the competing means of valorisaton implied in the possession of DCOs. For instance when considerations about continuing engagement with companies hosting DCOs pit exchange value and singular value against each other, or when the presence of the market, or their ensnarement with it, is perceived as contaminating possession or inhibiting the development of possession. Here there may be more to be understood about the acts of producing meaning and the mechanisms that ensnare most 'effectively'. Finally, as Hulland, Thompson and Smith (2015) point out, related to this are questions of corporate responsibility, such as the obligations corporations have to respect and protect consumers' digital possessions (and to compensate for their loss).

References

Amit, R., and Zott, C. (2001). Value Creation in E-Business. *Strategic Management Journal*, (6/7). 493.

Anderson, E. W. and Mittal, V. (2000). Strengthening the Satisfaction-Profit Chain, *Journal o f Service Research*, 3 (2). 107-120.

Appadurai A. (1986). *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge University Press: Cambridge.

Arvidsson, A. (2005). Brands: A critical perspective. *Journal of Consumer Culture*, 5, 235-58.

Bales, E. and Lindley, S. (2013). Supporting a sense of connectedness: Meaningful things in the lives of new university students. In Proceedings of the 2013 ACM conference on Computer Supported Cooperative Work (CSCW 2013), 1137-1146. New York: ACM Press. doi:10.1145/2441776.2441905.

Banks, J. and Deuze, M. (2009). Co-creative labour. *International Journal of Cultural Studies*, 12(5), 419-431.

Banks, R., Kirk, D. and Sellen, A. (2012) A Design perspective on three Technology Heirlooms. *Human-Computer Interaction.* 27, 1-2, p.63-91

Bardhi, F. and Eckhardt, G.M. (2012). Access-Based Consumption: The Case of Car Sharing. *Journal of Consumer Research*, 39(4). 881-898. doi 10.1086/666376

Bardhi, F., Eckhardt, G.M. and Arnould, E.J. (2012) Liquid Relationship to Possessions. *Journal of Consumer Research*, 39(3), 510-529.

Batra, R., Ahuvia, A., and Bagozzi, R. P. (2012). Brand Love. *Journal of Marketing*, 76(2). 1-16

Baudrillard, J., 1998[1970]. *The Consumer Society*. London: Sage

Bauman, Z. (2001). *The Individualised Society*. Cambridge: Polity

Bauman, Z. (2007). *Consuming Life*. Cambridge: Polity

Bauman, Z. and Lyon, D. (2012). *Liquid Surveillance: A Conversation*. Cambridge: Polity

Bauer H., Heinrich D. and Albrecht, C-M. (2009). All you need is love: assessing consumers' brand love, *American Marketing Association Summer Educators' Conference*, Chicago

Bazilian, E. (2011, May 14). Google Kicks Off TV Campaign to Promote Chrome- Ads tug at heartstrings of Internet users. *Adweek*. Retrieved from: http://www.adweek.com/news/advertising-branding/google-kicks-tv-campaign-promote-chrome-131322

Beckett A (2012) , Governing the consumer: technologies of consumption, *Consumption, Markets and Culture*, Vol 15, Iss 1, p1-18.

Belk, Russell W. (1988), "Possessions and the Extended Self," *Journal of Consumer Research*, 15 (September), 139–68.

Belk, R.W. (2010). Sharing. *Journal of Consumer Research*, 36 (February), 715–34. doi: 10.1086/612649

Belk, R.W. (2013a). Extended Self in a Digital World. *Journal of Consumer Research*, 40(3). 477-500. doi: 10.1086/671052

Belk, R.W. (2013b). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, 67(8). 1595–1600. doi: 10.1016/j.jbusres.2013.10.001

Belk, R.W., Sherry Jr., J., and Wallendorf, M., (1988). A Naturalistic Inquiry into Buyer and Seller Behavior at a Swap Meet. *Journal Of Consumer Research*, 14 (4), 449-470.

Belk, R.W., Wallendorf, M. and Sherry Jr., J.F. (1989) The Sacred and the Profane in Consumer Behavior: Theodicy on the Odyssey. *The Journal of Consumer Research*, 16(1), 1-38.

Blizzard (2014). *World of Warcraft End User Licence Agreement*. Retrieved from http://us.blizzard.com/en-us/company/legal/wow_eula.html

Bonsu, S.K. and Darmody, A., (2008). Co-creating Second Life: Market-consumer co-operation in contemporary economy. *Journal of Macromarketing*, 28(4), 355-368.

Callois, R. (1958), *Man, Play, and Games,* New York: Free Press.

Campbell, C., (2005). The Craft Consumer: Culture, craft and consumption in a postmodern society. *Journal of Consumer Culture*, 5(1) 23-42.

Carroll, B. A., and Ahuvia, A. C. (2006). Some Antecedents and Outcomes of Brand Love. *Marketing Letters*, (2). 79.

Carroll, E. and Romano, J. (2010). *Your Digital Afterlife: When Facebook, Flickr and Twitter Are Your Estate, What's Your Legacy*? Berkeley, CA: New Rider's Press.

Casadesus-Masanell, R., and Ricart, J. E. (2011). How to Design A Winning Business Model. *Harvard Business Review*,89(1/2). 100-107.

Chaudhuri, A. and Holbrook, M. (2001). The Chain of Effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty, *Journal o f Marketing*, 65 (April). 81- 93.

Chen, Y. (2009). Possession and Access: Consumer Desires and Value Perceptions Regarding Contemporary Art Collection and Exhibit Visits. *Journal of Consumer Research*, 35 (April). 925–40. doi: 10.1086/593699

Chowdrhy, A. (2015). *Facebook Launches A New Scrapbook Feature To Keep Photos Of Your Children Organized*. Available from: http://www.forbes.com/sites/amitchowdhry/2015/03/31/facebook-scrapbook/ [Accessed 2 April 2015]

Cohen, N. S., (2008). The Valorization of Surveillance: Towards a Political Economy of Facebook. *Democratic Communiqué*,1, 5-22

Cova, B. and Dalli, D. (2009). Working consumers: the next step in marketing theory? *Marketing Theory*, 9(3), 315-339.

Czikszentmihalyi, M. and Rochberg-Halton, E. (1981). *The Meaning of Things: Domestic Symbols and the Self*. Cambridge, MA: Cambridge University Press.

Denegri-Knott, J. and Molesworth, M. (2009) "I'll sell this and I'll buy them that": eBay and the management of possessions as stock. *Journal of Consumer Behaviour*, 8, (6), 305-315

Denegri-Knott, J. and Molesworth, M. (2010). Concepts and Practices of Digital Virtual Consumption. *Consumption, Markets and Culture*, 13(2). 109-132. doi: 10.1080/10253860903562130

Denegri-Knott, J and Molesworth, M (2013) Redistributed consumer desire in digital virtual worlds of consumption. [in special issue: Virtual Worlds] *Journal of Marketing Management*, 29, (13-14), 1561-1579.

Denegri-Knott, J., Watkins, R. and Wood, J. (2012). Transforming Digital Virtual Goods into Meaningful Possessions. In M. Molesworth and J. Denegri-Knott (Eds.). *Digital Virtual Consumption* (pp. 76-91). Oxford: Routledge.

Diamond N., McGrath, M., Sherry, J.F., Kozinets, R.V., Muniz, A.M. Jr. and Borghini, S. al. (forthcoming), "Brand Fortitude in Moments of Consumption" Sourcebook of Anthropology in Business, Rita Denny and Patricia Sunderland, eds., Walnut Creek, CA: Left Coast Press

Diamond, N., Sherry Jr. J.F., Muñiz Jr., A.M., McGrath, M.A., Kozinets, R.V., and Borghini, S. (2009). American Girl and the Brand Gestalt: Closing the Loop on Sociocultural Branding Research, *Journal of Marketing* 73(3):118-134

Epp, A., and Price, L. (2010). The Storied Life of Singularised Objects: Forces of Agency and Network Transformation. *Journal of Consumer Research*, 36(5). 820-837. doi: 10.1086/603547

Eurich, M., Weiblen, T., and Breitenmoser, P. (2014). A Six-step Approach to Business Model Innovation. *International Journal of Entrepreneurship and Innovation Management*, 18(4), 330-348.

Evanschitzky, H. Ramaseshan, B, Woisetschläger, D M, Richelsen, V Blut, M, and Backhaus, C (2012) Consequences of customer loyalty to the loyalty program and to the company, *Journal of the Academy of Marketing Science*, 40 (5) 625-638.

Facebook, (2015).*Terms*. Available from: http://www.facebook.com/legal/terms [Accessed 12 February 2015].

Farrell, J., and Klemperer, P. (2007). Coordination and Lock-in: Competition with Switching costs and Network Effects. *Handbook Of Industrial Organization*, 3, 1967-2072.

Featherstone, M. (1991). *Consumer Culture and Postmodernism*. London: Sage

Fournier, S. (1998). Consumers and Their Brands: Developing Relationship Theory in Consumer Research. *Journal of Consumer Research*, 24(4). 343-373.

Fuchs, C. 2010. Labour in Informational Capitalism. *The Information Society* 26 (3): 176-196.

Fuchs, C. and Sevignani, S. (2013) What is Digital Labour? What is Digital Work? What's their Difference? And why do these Questions Matter for Under- standing Social Media?, *TripleC* 11(2): 237-293

Furby, L., (1978). Possession in humans: an exploratory study of its meaning and motivation. *Social Behavior and Personality: an International Journal*, 6(1), 49-65.

Grayson, K. and Schulman D. (2000). Indexicality and the Verification Function of Irreplaceable Possessions: A Semiotic Analysis. *Journal of Consumer Research*, 27(June), 17-30. doi: 10.1086/314306

Gregson, N. and Crewe, L. (2003). *Second Hand Cultures*. Oxford, UK: Berg.

Guadagni, P. M. and Little, J. (2008). A Logit Model of Brand Choice Calibrated on Scanner Data, *Marketing Science*, 27 (1). 2948.

Hardt, M. and Negri, A., (2000). *Empire*. Cambridge, Mass: Harvard University Press

Hardt, M. and Negri, A., (2004). *Multitude: War and Democracy in the Age of Empire*. New York: Penguin Press.

Harrison, M. P., Beatty, S. E., Reynolds, K. E., and Noble, S. M. (2012). Why Customers Feel Locked Into Relationships: Using Qualitative Research to Uncover The Lock-in Factors. *Journal Of Marketing Theory and Practice*, 20(4), 391-40

Hulland, J., Thompson, S.A., and Smith, K.M. (2015). Exploring Uncharted Waters: Use if psychological ownership theory in marketing, J*ournal of Marketing Theory and Practice* 23(2):140–147.

Huizinga, J (1938), *Homo Ludens: A Study of the Play Element of Culture*, Boston: Beacon.

Instagram, (2015). *Terms of Use*. Available from: http://instagram.com/about/legal/terms/ [Accessed 14 February 2013].

Keen, P., and Williams, R. (2013). Value architectures for digital business: beyond the business model. *MIS Quarterly*, 37(2). 643-647

Kirk D. and Banks R. (2008) On the Design of Technology Heirlooms. *In Proceedingsof the International Workshop on Social Interaction and Mundane Technologies* (SIMTech'08).

Kirk D. and Sellen A. (2010). On Human Remains, Values and Practice in the Home Archiving of Cherished Objects. *Transactions on Computer-Human Interaction* 17(3): 1–43.

Kline S, Dyer-Witheford N and De Peuter G (2003) *Digital Play: The Interaction of Technology, Culture, and Marketing*. Montreal, QC, Canada: McGill-Queen's University Press.

Kopytoff, I. (1986). The cultural biography of things, commoditization as a Process in *The Social Life of Things Commodities in a Cultural Perspective*, Arjun Appadurai (ed.). Cambridge University Press: Cambridge: 64-94.

Kozinets, R.V., Sherry, Jr. J.F., Storm, D., Duhachek, A., Nuttavuthisit, K., and DeBerry- Spenc, B. (2004) Ludic Agency and Retail Spectacle, Journal of Consumer Research, 31(3): 658-672

Kucharik, A. (2003). Vendor lock-in. http://searchopensource.techtarget.com/qna/0,289202,sid39_gci913129,00.html.

Kucklich, J. (2005). Precarious Playbour: Modders and the Digital Games Industry, *The Fibreculture Journal*, Issue 5 http://five.fibreculturejournal.org/fcj-025-precarious-playbour-modders-and-the-digital-games-industry/

Lastovicka, J.L., and Fernandez, K.V., (2005). Three Paths to Disposition: The Movement of Meaningful Possessions to Strangers. *Journal of Consumer Research*, 31(March), 813-832.

Latour B. (1993). *We Have Never Been Modern*. Hertfordshire: Harvester Wheatsheaf.

Latour, B. (2005). *Reassembling the Social: An Introduction to Actor–Network Theory*. Oxford, UK: Oxford University Press

Law, J (2004). *After Method: Mess in Social Science Research*. London: Routledge

Lazzarato, M., (1996). Immaterial Labor (Translated by P. Colilli and E. Emery). In: Hardt, M. and

Virno, P., eds., *Radical Thought in Italy: A Potential Politics*. Minneapolis: University of Minnesota Press, 133-147.

Lee M.J. (1993) *Consumer Culture Reborn: The Cultural Politics of Consumption*. London: Routledge

Lehdonvirta, V. (2012) A history of the digitalization of consumer culture: From Amazon through Pirate Bay to FarmVille IN: J. Denegri-Knott and Molesworth, M. (eds.) *Digital Virtual Consumption*. New York: Routledge, 11-28.

Liu, Y. (2007). The Long-Term Impact of Loyalty Programs on Consumer Purchase Behavior and Loyalty. *Journal Of Marketing*, 71(4). 19-35.

Mashable (2013). *The Internet In 2012: 634 Million Websites, 2.4 Billion Users*. Available from: http://mashable.com/2013/01/17/the-internet-in-2012-634-million-websites-2-4-billion-users-1-3-trillion-google-searches/ [Accessed 12 February 2013].

McCracken, G. (1986). Culture and Consumption: A theoretical account of the structure and movement of the cultural meaning of consumer goods. *Journal of Consumer Research*, 13(June), 71-84. Retrieved from: http://www.jstor.org/stable/2489287

McCracken, G.D. (1986). *Culture and Consumption, New Approaches to the Symbolic Character of Consumer Goods and Activities*. Indiana University Press: Bloomington, IN.

Meyer-Waarden, L. and Benavent, C. (2006). The Impact of Loyalty Programmes on Repeat Purchase Behaviour, *Journal of Marketing Management*, 22 (February). 61–88.

Mol, A. (1999). Ontological Politics: a Word and Some Questions. In J. Law and J. Hassard (Eds.) *Actor Network and After*. Oxford and Keele, Blackwell and the Sociological Review: 74-89. *How are worlds, realities, performed into being? This is an ANT question. Here an 'ontological politics' is imagined.*

Molesworth, M and Denegri-Knott, J (2013) Digital virtual consumption as transformative space. In, Belk, Russell W. and Llamas, Rosa (eds.) *The Routledge Companion to Digital Consumption*. Abingdon, GB, Routledge, 223-234.

Molesworth, M and Watkins, R (forthcoming) Adult videogame consumption as individualised, episodic progress. *Journal of Consumer Culture*. (doi:10.1177/1469540514528195).

Moon, J., Hossain, M., Sanders, G., Garrity, E., and Jo, S. (2013). Player Commitment to Massively Multiplayer Online Role-Playing Games (MMORPGs): An Integrated Model. *International Journal Of Electronic Commerce*, 17(4). 7-38.

Morgan, N. A. and Rego, L.L. (2006). The Value of Differ- ent Customer Satisfaction and Loyalty Metrics in Predicting Business Performance, *Marketing Science*, 25 (5). 426-39..

Odom, W., Banks, R., Kirk, D, Harper, R., Lindley, S., Sellen, A. (2012). Technology Heirlooms? Considerations for Passing Down and Inheriting Digital Materials. In *proceedings of SIGCHI Conference on Human Factors in Computing Systems*. Austin, Texas. CHI '12. ACM Press. http://dx.doi.org/10.1145/2207676.2207723

Odom, W., Harper, R., Sellen, A., Kirk, D., Banks, R. (2010). Passing On and Putting To Rest: Understanding Bereavement in the context of Interactive Technologies. In *proceedings of SIGCHI Conference on Human Factors in Computing Systems*. Atlanta, USA. CHI ’10. ACM

Press, 1831-1840. http://dx.doi.org/10.1145/1753326.1753601

Odom, W., Zimmerman, J. and Forlizzi, J. (2011). Teenagers and their virtual possessions: design opportunities and issues. CHI '11 - *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 1491-1500. doi: 10.1145/1978942.1979161

Park, C. W, MacInnis, J.I, Priester, P., Eisengerich, A. and Iacabucci,(2010). Brand Attachment and Brand Attitude Strength: Conceptual and Empirical Differentiation of Two Critical Brand Equity Drivers, *Journal of Marketing*, 74 (November), 1-17.

Pine, B. J., and Gilmore, J.H., (1999). *The experience economy: Work is theatre and every business a stage*. Boston, MA:Harvard Business School Press.

Prahalad, C. K., and Ramaswamy, V.. (2000). Co-opting customer competence. *Harvard Business Review*, 78 (January-February), 79-87.

Price, L.L., Arnould, E.J. and Curasi, C.F. (2000) Older Consumers' Disposition of Special Possessions. *Journal of Consumer Research*, 27(2), 179-201.

Richins M. (1994). Valuing Things, the Public and Private Meanings of Possessions. *Journal of Consumer Research*, Vol. 21, No. 3 (Dec., 1994), pp. 504-521

Ritzer, G. (2004). *The McDonaldization of society*. Thousand Oaks, CA: Pine Forge.

Ritzer, G. and Jurgenson, N., (2010). Production, Consumption, Prosumption: The nature of capitalism in the age of the digital 'prosumer'. *Journal of Consumer Culture*, 10(1), 13-36.

Russell, C.A., and Schau, H.J. (2013). When Narrative Brands End: The Impact of Narrative Closure and Consumption Sociality on Loss Accommodation, Journal of Consumer Research 40(6):1039-1062

Scarabato, D. Carter-Schneider C. and Kedzior R. (2013) At world's end: Exploring consumer-marketer tensions in the closure of adverworlds, *Journal of Marketing Management*, 10

Scholz, T., (2013). (ed) *Digital Labor: The Internet as Playground and Factory*, New York: Routledge.

Sherry, J. F. Jr. (1983) Gift Giving in Anthropological Perspective, *Journal of Consumer Research*, 10 (2): 157-168.

Sherry, J.F. Jr. (1990). A Sociocultural Analysis of a Midwestern American Flea Market. *Journal Of Consumer Research*, 17(1), 13-30.

Sheth,J. Sisodia, R. and Sharma, A. (2000), The Antecedents and Consequences of Customer-Centric Marketing, *Journal of the Academy of Marketing Science* 2000; 28; 55

Slater, D., (1997). *Consumer Culture and Modernity*. London: Polity.

Spotify, (2013). *What is Spotify*? Available from: http://www.spotify.com/uk/about-us/press/information/ [Accessed 12 Feb2013].

Slashgear (2013), *Steam users eclipse Xbox Live, PSN still far and away tops*, October [available at: http://www.slashgear.com/steam-users-eclipse-xbox-live-psn-still-far-and-away-tops-30303588/]

Sutton-Smith, B. (1997). *Ambiguity of Play*, Cambridge: Harvard University Press

Tapscott, D., and Williams, A.D. , (2006). *Wikinomics: How mass collaboration changes everything*. New York: Portfolio.

Terranova, T. (2000). Free labor: Producing culture for the digital economy. *Social Text*, 18(2), 33-58.

Thomson, M., MacInnis, D.J. and Park, C.W. (2005). The Ties That Bind: Measuring the Strength of Consumers' Emotional Attachments to Brands, *Journal of Consumer Psychology*, 15 (1). 77–91.

Tinson, J. and Nuttall, P., (2008). Insider Trading? Exploring Familial Intragenerational Borrowing and Sharing. *European Advances in Consumer Research*, 8, 41–42.

Vargo, S. L., and Lusch, R.F., (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing* 68 (January), 1-17.

Wallendorf, M. and Arnould, E. (1988). "My Favorite Things": A Cross-Cultural Inquiry into Object Attachment, Possessiveness, and Social Linkage. Journal of Consumer Research 14: 531–547.

Watkins, R.D. Forthcoming. The Ontologies of Digital Consumption Objects. *Advances in Consumer Research – North American Conference Proceedings, Volume 43.*

Watkins, R. and Molesworth, M., (2012). Attachment to Digital Virtual Possessions in Videogames. *Research in Consumer Behavior*, 14, 153-171.

Watkins, R. Molesworth, M. and Denegri-Knott, J. (forthcoming), Ownership and Possession of Digital Virtual Goods, *Journal of Marketing Management.*

Watson, M. and Shove, E. (2008). Product, competence, project and practice: DIY and the dynamics of craft consumption. *Journal of Consumer Culture*, 8(1), 69-89.

Zhang J and Breugelmans E (2012) The Impact of an Item-Based Loyalty Program on Consumer Purchase Behavior. *Journal of Marketing Research*: February 2012, Vol. 49, No. 1, pp. 50-65.

Zhu, K.X. and Zhou, Z.Z. (2011), Lock-In Strategy in Software Competition: Open-Source Software vs. Proprietary Software Information Systems Research, *Articles in Advance*, pp. 1–10,

Zwick, D., Bonsu, S. and Darmody, A., 2008. Putting consumers to work: 'Co-creation' and new marketing govern- mentality. *Journal of Consumer Culture*, 8(2), 163-196.