

## **A history of the digitalization of consumer culture: From Amazon through Pirate Bay to FarmVille**

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*Abstract.* The purpose of this chapter is to examine how information society interacts with consumer society. I trace a brief history of the digitalization of consumption, starting from the online retail sites of 1990s and ending with digital virtual consumption in online games and communities. On the way, I ask what changes, if any, digitalization has brought about in the sites, processes, subjects and objects of consumption. Consumers have not necessarily become any less materialistic despite goods turning digital. But virtualized consumerism presents a new hope for environmentalists.

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## Introduction

It is frequently argued in sociology that consumption has become a central part of life in contemporary post-industrial societies, also known as “consumer societies” (Baudrillard, 2002). More recently, the rapid diffusion of information and communication technologies (ICTs) in everyday life has inspired discourses on “information society” (Castells and Himanen, 2002). There is a relative dearth of scholarship addressing the intersection of these two major paradigms. The purpose of this chapter is to examine how information society interacts with consumer society in a broad range of processes that can be termed the *digitalization of consumption*.

For a long time, studies on information technology consumption focused on the consumption of the technologies and devices themselves. Researchers focused on such questions as how many households have Internet access, and what kind of people use mobile phones most frequently. But the adoption of digital technologies in everyday life has also had a profound influence on the way we consume other goods and services. Products are increasingly examined, compared, purchased and paid for on the Internet and through mobile services. Consumption-related information is disseminated and discussed on blogs and forums. Consumers self-organize on social networking sites, and take active roles in production processes through crowdsourcing and other technologies. One of the most striking developments has been the rise of digital virtual consumption: millions of people around the world are now spending billions of euros per year on virtual items, characters and currencies in online games, social networking sites and other digital hangouts (Lehdonvirta and Ernkvist, 2011).

The method of this chapter is to trace a brief history of different phases in the digitalization of

consumption. The story is structured around a distinction between the sites, processes, subjects and objects of consumption, and the analysis draws on three theoretical approaches to consumption in the social sciences: economic, structural and hedonistic. This allows the chapter to provide some answers to the questions that one encounters when looking back on the history of digital consumption: What is the difference between buying a book online versus buying it from a brick-and-mortar store? Why are some people so attracted to seemingly non-existent virtual items as to be willing to pay real money for them? Does this economization and consumerization of online interactions represent a failure of the higher ideals that many had for the digital world? I conclude the chapter with a discussion of how the digitalization of consumption and especially digital virtual consumption bear on the big question of consumer society: reconciling markets with environmental sustainability.

## **Approaches to analysing consumption**

The consumer theory of modern mainstream microeconomics posits that each consumer has a set of *preferences* that determines which goods and in which quantities they choose to purchase from the market within the constraints of their budget (Jehle & Reny, 2001).

Economics does not present a theory of where consumer preferences come from, however. It is assumed that preferences are something that exist prior to and independently of their possible satisfaction: they are “latent wants” that become realised in the act of consumption (Campbell, 2004: 37). In sister disciplines such as marketing and management studies, the source of these wants is commonly located in notions of “basic human needs” borrowed from psychology and physiology. According to a classic marketing textbook, “[n]eeds are the basic human requirements. People need food, air, water, clothing, and shelter to survive. People also have strong needs for recreation, education, and entertainment.” (Kotler, 2003: 11)

Following the ideas of Maslow, these needs are moreover thought to adhere to a hierarchy

of importance that determines the order in which they must be satisfied (Kotler, 2003: 196).

Sociologists have criticised the idea of all consumer behaviour emanating from a set of inborn needs (e.g., Baudrillard, 2002; Belk, 2004; Campbell, 1998; Slater, 1997: 133-136). In extreme conditions, it is clear that physiological needs can predict consumer behaviour. But the wants that people pursue in more affluent societies can be seemingly pointless or even counterproductive from a physiological or psychological perspective. Any consumption decision, such as the purchase of virtual items, can always be explained after the fact as the pursuit of a suitably abstract need, such as the need for self-actualisation. If the only evidence for such an abstract need is the behaviour it is supposed to explain, then the theory is a simple tautology.

Whatever the source of consumer preferences, in the economic approach to the study of consumption it is assumed that their fulfilment is the source of well-being (Jehle & Reny, 2001: 5). Key analytical concerns in this approach are such issues as transaction costs, entry barriers and other hurdles that may prevent consumers from exercising their choice to the fullest possible extent. When analysing the digitalization of consumption from this perspective, the main question is whether it helps or hinders the fulfilment of consumer choice.

Outside economics and marketing, consumption is examined and theorised in the works of sociologists, anthropologists and cultural theorists. With some simplification, it is possible to identify two major perspectives from this sizeable literature: *consumption as social signification* and *consumption as a hedonistic project*. I refer to the former as the structural approach to consumption and the latter as the hedonistic approach. If economic consumer theory assumes that consumers behave according to their preferences over goods, then the structural and hedonistic approaches provide substance to that theory by explaining where

those preferences come from. At the same time, some of the theories also question the economic theory's behavioral assumption, positing that consumers are driven not so much by their own rational calculations as they are by the positions they occupy in social structures.

The structural approach to analysing consumption focuses on the use of goods as tools for communicating and constructing social bonds and distinctions. Generally speaking, consumers are seen as communicators who use commodities to express social status, class distinctions, group memberships and identity positions (e.g. Veblen, 1997[1899]; Simmel, 1957[1904]; Bourdieu, 1984). Commodity flows also demarcate, structure and strengthen social relationships (e.g., Mauss, 1990; McCracken, 1990). In contrast to the economic view, "needs" and "necessities" are not seen as objective truths, but as culturally defined categories (Belk, 2004; Bauman and May, 2001: 147-162). Increasing affluence and the continuous introduction of new goods into society results in classificatory shifts, where goods that were previously considered luxuries are redefined as necessities and eventually as necessities (Belk, 2004: 71-72). Digital technologies are currently undergoing such a shift. For example, the mobile phone that used to be a luxury of top executives is now an everyday necessity for Finnish and Japanese teenagers (Wilska, 2003; Rantavuo, 2006). In Finland, broadband Internet connection has been declared a basic right.

In the structural approach, the satisfaction derived from goods is primarily linked to their use as markers, and only secondarily related to their physical consumption (Douglas and Isherwood, 1978). An extreme example of this is the accumulation of collectible objects, which can be completely "useless" and non-functional (Baudrillard, 1994). Even if the collected objects were once useful in some way, when they enter the collection they are no longer used in their original purpose (Belk, 1995; 2004). Although collectors frequently describe the thrill of the hunt for collectible objects, Belk (1995) argues that the hunt is, in the

end, usually a highly competitive game of status seeking.

At the same time, Belk (2004) acknowledges that the collector's single-minded pursuit can also be seen as highly pleasurable romanticism: noble saving of objects that few others appreciate. This position brings us to the hedonistic approach to consumption, which focuses on the emotional pleasures and experiences of consumption. For Campbell (1989; 1998; 2004), consumption is not so much a means of constructing identities as it is a means of *exploring* one's self-identity. As consumers expose themselves to different goods on the marketplace, they learn about their own identity by monitoring their own responses to different choices and products. For Campbell, consumption is less about acquisition and more a quest of exploration to become as acquainted with one's inner self as possible.

A problem with Campbell's theory is that it assumes that consumers have one "true" self-identity that they explore. Others, such as Featherstone (1991), posit that consumption is a vehicle for daydreaming. Featherstone argues that urban everyday life is *aestheticized*: overflowing with imagery that can evoke dream-like and pleasurable aesthetic sensations. He invokes Baudelaire's concept of a *flâneur* – a gentleman strolling the streets to experience the sights and sounds of the city – to describe the contemporary consumer. The majority of the processes of consumption take place inside the strollers' imagination in response to what he experiences. Featherstone also describes a more active citizen of the city of consumption, reminiscent of the dandies of the same period as the *flâneur*. The dandy fashions life as an artistic project that consists of the creative mixing of consumption styles and a pursuit of ever new hedonistic experiences.

Critical thinkers such as Baudrillard (2002) suggest that markets have long ago hijacked the sociological and hedonistic processes described above. Marketing produces a continuous flow of new images and signs to be used in daydreams and social distinction games.

Baudrillard uses the term *commodity-sign* to describe the products of this economy. Although from an economic perspective it would seem that consumers “prefer” each successive generation of signs to the previous one, for Baudrillard it is not clear if this cycle results in any actual increases to wellbeing. What is clear, however, is that each new turn of the cycle consumes another portion of the planet’s natural resources.

Awareness of the detrimental effects consumer culture is having on the environment is increasing, and related changes can be seen taking place in advertising and public discourse: an increasing emphasis on ostensibly “green” products and services as signals of cultural competence, and the recasting of some highly resource consuming activities and products as unfashionable and ignorant choices. Silvestro (2009) outlines two perspectives to these changes. A hopeful view sees the green consumption boom as “responsible consumerism [...] a change in values and an improvement of capitalism” (Silvestro, 2009: 281). A more cynical view sees no reason to doubt that consumers’ choices remain nothing but moves in a game of social signification and distinction. “Green” goods are, after all, usually more expensive, exclusive and difficult to maintain (Haanpää, 2007).

## **Sociological analysis of information technology consumption**

Many sociologists have examined how technical appliances are used in social signaling. For example, empirical studies show that socio-economically disadvantaged people tend to consume new technologies less than socio-economically advantaged people (Hsieh et al., 2008; Räsänen, 2006; 2008). One explanation for this is that working class people lack the necessary education and spending power to enter the digital age. But a more Veblenian interpretation is that higher classes are drawn to novel and expensive gadgets because of the gadgets’ ability to create social distinctions (Yoshimi, 2006. 76). From a cultural perspective,

new technologies are often associated with an array of new advertising images. Successive generations of hardware promise new varieties of freedom, creativity and adventure that enter consumers' daydreams. In this sense, new technologies are no different from new types of sneakers or new varieties of washing powder.

But besides being consumption objects themselves, digital technologies have also had a profound influence on the consumption of other goods and services. We can thus distinguish between two kinds of analyses: analyses of digital technologies as consumption objects, and analyses of the consumption of other goods and services through digital means. Today, consumption practices that involve or make use of digital technology are numerous. For the purposes of analysis, it is useful to break down the concept of consumption into smaller elements. Ritzer (2001) suggests that we examine how digital technology bears on the *sites*, *processes*, *subjects* and *objects* of consumption. The subjects of consumption are the consumers themselves. The objects of consumption are the goods or services being consumed. In the following sections, I will trace a brief history of the practices and discourses of digital consumption, starting with changes in the sites and processes of consumption and ending with transformations in the subjects and objects. At the same time, I will provide analyses of these changes using the three perspectives outlined in the previous section.

## **Changes in the sites and processes of consumption**

The consumer Internet boom that started in the mid-1990s prompted retailers to start building facilities for online shopping. The basic model of online retailing was the same as with the existing modes of remote retailing, mail order catalogues and TV shopping, and utilised most of the same infrastructure: huge warehouses for stock and logistics, mail and delivery

companies for distribution, and credit cards for payment. Advertisers and other public discourse highlighted the economic benefits of this new mode of shopping (Underhill, 2000). Shopping at online stores is available at any time from any place with an Internet connection. It can be fast and efficient compared to the process of selecting from a mail order catalogue and relaying the order to an operator over the phone. Web search tools enable much more efficient price comparisons than traditional modes of shopping do. Thus, although the digitalization of the retail process introduced a whole world of new problems in the form of computer related problems and glitches, it realized certain clear advantages in the areas of convenience and availability.

At the same time, online shopping has been criticized for failing to provide the sensual and social benefits of traditional brick-and-mortar retail. Underhill, writing in the late 1990s, identified “three big things that [physical] stores alone can offer shoppers”: “touch, trial or any other sensory stimuli”, “immediate gratification”, and “social interaction”: the company of other shoppers as well as interactions with shop staff (2000: 218). According to Underhill, online shopping is more about “orderly, planned acquisition of goods” than the “sensual, experiential aspects of shopping” (2000: 218).

Others were even more pessimistic about the ways in which the digitalization of shopping sites changed the social aspect of consumption. Ritzer saw online shopping sites as “dehumanized and dehumanizing worlds in which satisfaction from human action and interaction is all but impossible.” (Ritzer, 2001: 150) Friends, shop assistants and other human beings are totally eliminated from the process, and the consumer enters their own computer-generated “dreamworld” of consumption. As social controls are eliminated, consumers are increasingly vulnerable to the online shopping sites, which are moreover always available and therefore harder to escape from. At the same time, local brick-and-

mortar markets are presumably out-competed by the self-service digital markets, so that shopping loses its function as an activity for strengthening social ties between local community members. On the other hand, the acquisition of “useless” goods merely for the purposes of using them as social markers may also decrease.

Some commentators have highlighted a more positive transformational aspect of digital shopping sites: their ability to provide a far wider selection than it is possible to find even in the largest superstores or mail order catalogues (Underhill, 2000; Anderson, 2006). For example, while a typical Borders bookstore offers a selection of 100,000 books, Amazon.com has an inventory of 3.7 million book titles (Anderson, 2006). A similar situation prevails in several other industries and product categories. The massive selection is made possible by the low cost of listing products in an online store as well as efficient searching and browsing features that allow customers on the Web to find what they are looking for.

A consequence of the huge selection is that consumers’ purchases can be distributed over a much wider range of products than what was previously possible, a *long tail*, enabling greater divergence and fragmentation in tastes and styles. According to Anderson (2006), this allows consumers much greater freedom to express their preferences, not being constrained by their local retailer’s selections. This is obviously an advantage from the economic perspective, but it also has cultural implications. Anderson contrasts manufactured “hit culture”, engendered by limited shelf space, with a new “niche culture”, where consumption patterns reflect the true diversity of tastes in society. Anderson believes that this postmodernist “niche culture” is morally superior, because it reflects people’s tastes in a “purer” way. He suggests that it allows shoppers to realise “the true shape of demand in our culture, unfiltered by the economics of scarcity” (Anderson, 2006: 9).

Featherstone (1998) and Denegri-Knott and Molesworth (2010a; 2010b) connect digital

consumption sites and processes to the hedonistically oriented consumption literature.

Featherstone's early analysis describes the online world as a supercharged cityscape where the *flâneur* does not have to wait until the next street corner to experience a new vista; he can simply click a hyperlink and be instantly transported. At the same time, however, the trip through the city loses its narrative structure and it becomes impossible to make sense of the experience in the traditional way.

Denegri-Knott and Molesworth's detailed analysis of eBay (2010a) reveals how the site's massive selection of goods is being used by consumers to stimulate imagination and fashion daydreams. In support of this notion, they note that the majority of purchases in online sites are only taken as far as the checkout stage, and cancelled just before any money is spent. Far more people stroll around the digital shopping arcades than actually spend money on them. From an economic perspective, this may sound as if digital shopping sites are failing to fulfil consumers' needs. But from a hedonistic perspective, this observation suggests that digital shopping sites have psychological significance that goes far beyond their economic impact. Even if the first wave of digitalization lead to a "rationalization" of the sites and processes of consumption, people quickly discovered how to adapt them for their hedonistic aims.

## **Changes in the consumer**

Since mid-2000s, there has been much enthusiastic discussion under such rubriks as *remix culture*, *Web 2.0*, and most recently, *social media* (Benkler, 2006; Hietanen et al., 2007; Lessig, 2004; Scoble and Israel, 2006; Surowiecki, 2005; Tapscott and Williams, 2006). The basic claim in these discussions is that certain new technologies and, more importantly, new ways of designing online services have lead to a radical empowerment of the consumer. Technologies and design techniques such as blogs, RSS feeds, tags, social networking, web

applications, Creative Commons licensing and peer-to-peer networking have permitted users to emerge from uninformed shoppers into discerning connoisseurs, from passive consumers to active producer-consumers, and from isolated individuals to “carrot mobs”.

The first new digital consumer was arguably the “pirate” that got involved in the distribution of digital goods. Starting from 1990s, peer-to-peer file sharing programs “empowered” users to duplicate and distribute software, music, movies and digital books to each other in a very efficient manner outside the official distribution channels and schedules. This gave rise to an ongoing conflict between “file sharers” and the entire copyright industry. Although many authors writing about Web 2.0 and social media would probably not associate illegal file sharing with participatory web culture, it is clearly one of the first instances of digital technology radically changing the role of consumers in a market. In the traditional copyright regime, the production of new information goods, especially cultural content such as music and movies, is based on large investments in production and marketing, which may later be recouped by monopoly profits made possible by copyright. In contrast, the political agenda of file sharers, as expressed by the Pirate Party of Sweden (which holds two seats in the European parliament), involves scaling back the copyright regime in favour of free private copying and “culture-sharing”. This goal is exemplified by the file sharing hub *Pirate Bay*.

Another change in the consumer can be seen in the value appraisal part of the value chain. The web has been a platform for people to express their opinions and experiences regarding products since its popularisation in mid-1990s, but only the latest wave of the so-called Web 2.0 techniques has allowed that information to be organised, ordered and filtered in ways that make it highly usable to individual consumers (Scoble and Israel, 2006). As a result, consumers now have more powerful means and varied angles at their disposal when they seek to assess and compare the value of information goods (Benkler, 2006). Social

networking and mobile communication technologies have also permitted individual consumers to self-organise in ways that improve their traditionally weak bargaining position against vendors. For example, in China, groups formed for the purpose of *tuángòu* or team buying use their market power to negotiate lower prices with vendors (Montlake, 2007). The participatory wave of web technologies has enabled online shopping to regain much of the sociability that the first wave of online retail was criticized for lacking.

Finally, a third change is that the digital consumer can also assume a more active role in the production side of the economy. New technologies allow users to move from passively experiencing goods to actively participating in the experience, appropriating the goods to new uses, and combining and altering the goods to create entirely new experiences. For instance, new software for editing videos, sampling music and touching photographs (often acquired from peer-to-peer networks without paying for a license) has enabled suitably skilled participants to create “remix culture” on the basis of industrially produced cultural products (Lessig, 2004). Open-source software and web application mashups are somewhat analogous phenomena in other fields of production.

Another set of technologies that transforms consumers into producers is known as *crowdsourcing*. Crowdsourcing entails outsourcing tasks traditionally performed by employees or contractors to a large group of people (i.e. a crowd) through the Internet (Howe, 2008). Most early examples of crowdsourcing are extensions of marketing campaigns (Kleemann et al., 2008). But in other cases, companies approach the crowd as a genuine source of ideas and productivity rather than as potential customers. For example, Amazon used crowdsourcing to identify duplicate product pages on its massive e-commerce site. It developed a website where people could look at product pages and get paid a few cents for every duplicate page they correctly identified. Other tasks that companies outsource to

anonymous Internet users include market research, data input, data verification, copywriting, graphic design and even software development (Lehdonvirta and Ernkvist, 2011). A market study estimated that over the past ten years, over one million workers have earned \$1-2 billion via crowdsourced work allocation (Frei, 2009). The new consumer that participates in processes of production has been called a *prosumer* by consumption scholars (Ritzer and Jurgenson, 2010; Collins, 2010).

A set of values, manifesting as the guiding principle of the digital consumer's actions, can be found implicit in much of the literature sketching the digital consumer. These values are clearly not the values of appropriation, accumulation and exclusivity, as found in the traditional status games of consumption, but more akin to the *hacker ethic* articulated by Steven Levy (1984): sharing to the benefit of others, using technology to improve the world, and valuing people based on their mental abilities rather than on their material possessions. The digital consumer is portrayed as an enlightened, post-materialistic consumer, in comparison to which the petty status games of the material consumer seem very last century. Benkler (2006) believes that participatory technologies lead to "a more critical and self-reflective culture". Collins (2010) calls his version of this notion the "prosumer culture".

How enlightened is the digital consumer, really? It is true that social media tools such as Facebook are frequently used for laudable purposes, such as organising "carrot mobs", or consumer groups who use their collective bargaining power to persuade companies to invest in environmentally friendly practices (Leivonniemi, 2008). Negative word of mouth about unethical businesses also spreads fast on online networks. But at the same time, new trends and fads also propagate on net at unprecedented speeds. Users collect points, friends, likes mentions, comments, coins and badges, and compare themselves with their peers. Processes of social comparison are no longer limited to physically proximate individuals: online social

networkers can compare their status and possessions with people who come from widely different strata of society (Ariely, 2008). In the end, it is not necessarily so that digital consumers have become less materialistic; it is simply that their material has become more digital.

## **Changes in the goods being consumed**

A third aspect of the digitalization of consumption is change in the objects being consumed. The first goods to be digitalized were information goods, such as music CDs and newspaper articles (Shapiro & Varian, 1999). Their value is based on the *information* they contain: a rendition of Beethoven's 9th symphony, for example, or the information that Osama bin Laden is dead. Digital information has the peculiar property that it can be shared with other people without losing any of its fidelity — or, as economists say, digital information is *non-rivalrous*. It is also hard to stop people from sharing digital information — or, as economists say, information is *non-excludable*. Because of these properties, digital information goods like MP3 files are radically different consumption objects compared to material information goods like CDs.

Digital information goods make poor collectables. Every copy of a digital good is indistinguishable from the original. There are no first pressings or limited editions, no old and new copies, no second-hand or new, only perfect mint. There is no scarcity: everyone can have everything. For the same reasons, digital information goods are also not as effective in structuring social relationships. They cannot be used as status items to distinguish rich from poor. They can, however, be used in the same way as fashion items to build distinctions through taste: you can have any music file you like, but do you know which one is the right signal in your network this season? Partly because of these shortcomings in digital

information goods as consumption objects, marketers have developed a new variety of digital goods, known as *virtual goods*. While digital information goods are well established in literature, this newer concept is much less explored. It is thus worth describing its history in some detail.

Both digital games and online communities have for a long time included features that simulate economic activity and trade: play money, simulated shopping malls and numerous kinds of virtual goods ranging from clothes to furniture (Lehdonvirta et al., 2009). For individuals immersed in these games and environments, these virtual goods and currencies have probably always been personally important. Yet they have not attracted the attention of consumption scholars, probably because they did not directly involve the spending of money.

This detached nature of virtual economies began to change when players started to exchange game assets for real money. Around 1999, some players of so-called massively multiplayer online games (MMOs) started to put their game goods on auction in the recently launched e-commerce sites like eBay (Castronova, 2005; Huhh, 2008). Perhaps surprisingly, they soon received bids from other players. When an auction was completed, payment was carried out using ordinary means, such as cheque or money order. The two players then met up in the game and the seller handed the auctioned object to the buyer. This way, an exchange value measured in U.S. dollars or Korean won could soon be observed for virtual goods ranging from characters to gold nuggets (Lehdonvirta, 2008). The biggest publicly reported player-to-player trade is the 2007 sale of a character in the online game *World of Warcraft* for approximately 7,000 euros (Jimenez, 2007).

As trade volumes increased, what started as a player-to-player phenomenon soon attracted commercial interest. Professional players, known as “gold farmers”, began to play the games for profit rather than pleasure, harvesting massive amounts of game assets and selling them to

wealthier players on online markets. By mid-2000s, this activity had grown into a whole industry that is now estimated to employ as many as 100,000 game labourers in digitally connected low-income countries such as China (Lehdonvirta and Ernkvist, 2011). Virtual goods are now also among the most sought-after commodities among cybercriminals (Krebs, 2009). They hack into players' game accounts, steal the enclosed items and currencies, and sell them on electronic marketplaces for a profit (Lehdonvirta and Virtanen, 2010).

Before long, game publishers and online community operators took note of this phenomenon. Instead of charging users a subscription fee or showing advertisements, they realised that they could generate revenues by selling virtual items to their users. This business model first became popular in Korea, China and Japan (Nojima, 2008; Wi, 2009; So and Westland, 2010), and around 2009, broke into mainstream Western online business (Lehdonvirta & Ernkvist, 2011). For example, American game developer Zynga makes relatively simple simulation and nurturing games that anyone can play for free on Facebook. Their hit game *Farmville* has at best claimed over 90 million active players. Those players who wish to advance faster in the game's virtual economy can buy items such as virtual tractors and tractor fuel. So many players do that Zynga expects to earn \$1.8 billion from its games in 2011. In total, approximately \$7 billion worth of virtual items and currencies were sold by publishers in 2010. More virtual tractors are sold in a day than real tractors in a year.

Even though virtual goods are digital, they are rivalrous and excludable by design. A virtual tractor cannot be copied without the game operator's cooperation. You can take a screenshot of it and send it to your friend, but the result is comparable to a photograph of a conventional tractor — just an image that bears none of the functionality of the original. In this sense, virtual goods are much closer to material goods than to what we conventionally think of as digital goods. In fact, empirical studies suggest that consumers use virtual goods for the very

same purposes as they use material goods: to seek fulfilment to needs, real or imagined (Martin, 2008; Lehdonvirta, 2009a; 2009b), to communicate and construct social distinctions, bonds and identity positions (Martin, 2008; Lehdonvirta, 2009b, Lehdonvirta et al., 2009), and to stimulate and pursue hedonistic fantasies (Denegri-Knott and Molesworth, 2010b).

Unlike digital information goods, artificially scarce virtual goods make great collectables and status items. The latest development in the market is that digital music and e-book publishers are trying to make their products resemble virtual goods. For example, a company called Kindlegraph has developed a technology that allows authors to make copies of their e-books unique by signing them. Has technology completed a full circle to arrive at where it left from? Not quite: compared to paper books, these new virtual books retain the benefits of weightless digital distribution.

Denegri-Knott and Molesworth (2010b) put forward a slightly different view of virtual consumption. They propose a taxonomy where virtual goods reside in a liminal space between the consumer's imagination (where consumers daydream about consumption) and the realm of material consumption (where daydreams are actualized). Since virtual goods are clearly more tangible than mere figments of imagination, they cannot be said to reside in the consumer's mind. Yet Denegri-Knott and Molesworth argue that they are not part of the material world of actual consumption, either. They argue that virtual goods "lack the material and sensual texture of the consumer goods of material consumption, [...] cannot fulfill physical needs and *cannot be used*" (2010b: 110; emphasis added). They moreover point out that many virtual goods exchanges do not involve real money at all; many sites allow users to engage in complex consumption-like acts without charge. Thus they put forward a taxonomy of three "realities" and proceed to provide an analysis of the functions of virtual goods in the consumer psyche.

I disagree with the notion that virtual consumption needs to be placed in a separate realm from “ordinary” consumption (Lehdonvirta, 2010a; 2010b). Being material has never been a hallmark of actualized consumption. Going to the cinema, purchasing a digital music file or gambling are all examples of actual but intangible consumption. To be precise, there is no such thing as completely immaterial consumption: even virtual goods physically manifest as magnetized regions on a ceramic platter inside a server computer, and are made perceptible to the user by bombarding their eyes with photons. Neither is spending money a necessary feature of actualized consumption. Many products and services are funded through other models than direct consumer payments, such as when advertising-funded newspapers are distributed for free. Quantitative consumer researchers observe not only the spending of money, but also of time and attention.

I also disagree with the suggestion that virtual goods cannot be used. Even if one discounts social and hedonistic uses such as using a virtual item as a gift or using it to seek sexual stimulation, many virtual items also have functional or “utilitarian” uses. Denegri-Knott and Molesworth point out that these functional uses are limited to the virtual environment: a virtual good “lacks material substance and cannot be used in material reality (a digital virtual sword cannot cut; a digital virtual car cannot be used to transport its owner)” (2010b: 110). It is implied that this limitation makes the usefulness somehow less real or less important. I have provided several arguments against this position elsewhere (Lehdonvirta, 2009b: 75-80). They can be summarized as follows. First, the usefulness of a material consumer good is often similarly limited to a very specific context, such as the garden (sprinkler, tree trainer) or the kitchen (egg separator, can drainer). These uses do not necessarily stem from some deep human need, but from the problematization of everyday life by marketing. Second, there is no reason to posit that material contexts are always primary to computer-mediated ones. For a

person whose hobbies and friends are online, virtual goods can be more tangible and useful than a car or a garden tool. In fact, I would suggest that on the Internet, material goods are not real. On the Internet, the veracity and ownership of a virtual good can be ascertained, whereas doing the same for a material good is very difficult. The majority of sports cars being bragged about by anonymous Internet conversants probably do not exist outside their ostensible owner's imagination.

A better way to define consumption is through the practices and beliefs of consumers. After all, consumption is a culturally defined category and not an intrinsic feature of any site or object. Among some audiences, virtual goods are being used in the same ways as others would use material goods. In some cases they may be used as stand-ins for or "simulations" of material goods, as Denegri-Knott and Molesworth suggest, to allow the consumer to fantasize about an expensive car, for example. But as more and more aspects of life, from friendships and family to work and leisure, are played out in part through mobile phones, social networking sites, console games and online communities, virtual goods turn from stand-ins to the real things and the actual objects of consumption.

## **Conclusions: digitalization of consumption and the future of consumer society**

In the preceding sections, I showed that the digitalization of consumption consists of changes to the sites, processes, subjects as well as objects of consumption. From this brief history, a picture of three distinct waves of digital consumption emerges: the online shopping wave, the participatory consumption wave, and the virtual consumption wave. In the first wave, brick-and-mortar stores were partly replaced and partly augmented by digital consumption sites and digital processes such as mobile payments. These news sites and processes had the effect of

extending the scope of consumption in multiple ways: extending the temporal and geographic availability of consumption, as well as the selection of available goods. From an economic perspective, this makes consumption more “convenient”. From a hedonistic perspective, it provides consumers with immense dreamworlds in which to fantasize about consumption.

In the participatory consumption wave, the subjects of consumption, the consumers themselves, are transformed by new information sharing and collaboration possibilities. The subjects are also offered new roles in economic processes, so that their status can change from simple consumers to participants or even prosumers. However, it is not clear at all that this represents an “improvement of capitalism” rather than an acceleration of it. Despite changes in discourses, the social logic of distinction and status competition are still very much apparent in the subjects’ actions. This penetration of consumer culture into digital spaces can be seen as a failure of some of the higher ideals that some held for the digital world (Lehdonvirta, 2010a).

Yet some striking changes can also be seen in the objects of consumption. These new objects, digital virtual goods, have only recently started to enter mainstream consumption. They are used in very similar ways as material consumption objects are used: to communicate and construct social distinctions, positions and bonds, and to pursue hedonistic projects and daydreams. Within the digital environments in which they are embedded, they can also be used as tools to solve problems, real or artificial, in the same way as material goods are used in other environments. In contrast to material goods, virtual goods give up any pretense of catering to some physiological human need. In this way, they are often more “honest” than some of the material goods of the consumer society, which continue to be marketed on the fantasy that their value is tied to some basic needs rather than to daydreaming and culturally defined games of signification.

These changes together make up the digitalization of consumption. What bearing, if any, does this process have on the big question of consumer society – reconciling market economy with environmental sustainability? The digital consumer may be somewhat better positioned to take collective action and steer society away from crisis, but so far there is no indication that this in itself is enough. Indeed, the digital consumer may be even more susceptible to “virally” diffused consumption trends that lead to wasteful resource use. Digital sites and processes of consumption, insofar as they extend the scope of consumption and facilitate manipulative marketing practices, can likewise be expected to abet hyperconsumption. At the same time, it must be noted that there are also research projects and government programs that seek to enlist the help of manipulative technologies, such as serious games, to change consumer behaviours towards more sustainable patterns (Yamabe et al., 2009).

Perhaps the most significant environmental potential is in the digitalization of the objects of consumption. The digital hardware and networks that are used to access virtual goods and other digital consumption objects are by no means free of resource consumption. On the contrary, it has been estimated that information and communication technologies account for 2 percent of global carbon dioxide emissions, approximately the same share as aviation (Gartner, 2007). However, the environmental impact of digital virtual consumption does not increase as a function of the number of virtual goods purchased. This is a key difference to material consumption, where each additional unit purchased represents a direct increase in the environmental footprint. In virtual consumption, each additional good represents at most an additional row in a database. Moreover, the disposal of virtual goods does not leave behind waste that needs to be stored or recycled. Publishers can create short-lived disposable virtual goods that keep the spending cycle going without increasing the environmental burden

in any way. Virtual goods also do not involve physical transportation, either of the good to the consumer or of the consumer to the consumption site.

If continuous consumption is a necessary aspect of contemporary society, either because it has become a crucial form of signification in our culture, or simply because our economic model requires it, then directing excess spending to virtual consumption instead of material consumption could help reconcile this social fact with the limitations of physical reality.

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