

PROSUMPTION AS A DISCURSIVE PRACTICE OF CONSUMER EMPOWERMENT:

**INTEGRATION OF INDIVIDUAL RESOURCES AND CO-PROSUMPTION OF
VALUE IN AN ONLINE COMMUNITY**

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*A thesis submitted to The University of Birmingham for the degree of
DOCTOR OF PHILOSOPHY*

Birmingham Business School

University of Birmingham

February 2016

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ABSTRACT

The purpose of this research is to explore the nature of an emerging practice known as 'prosumption', and interrogate its potential as a discursive practice which empowers consumers in an online community named Instructables. Prosumers combine the roles of consumers and producers to make their own products. A review of prosumption and closely-related practices (consumer co-creation) alongside discourses of consumer empowerment provides a guide to the research. A netnography-informed approach is used to collect data through a degree of participant observation and online depth interviews. Findings suggest that prosumption in Instructables is multidimensional in nature and benefits to prosumers. It suggests a typology of prosumers (assemblers, modifies, artists and inventors) to make a distinction between prosumer and co-creator roles. Findings also offer evidence of prosumption as a discursive practice of consumer empowerment through self-discipline and collective education in contrast to other exploitive practices such as consumer co-creation. This research finally contributes to the on-going evolution of consumer productivity and how consumers and producers participate as producers of value in market and society.

“To my Saint, my Dad,
for your love, wisdom, patience and motivation,
My life won't be the same without you (1942-2015)”

ACKNOWLEDGEMENTS

I would like to express my gratitude to all of the people and institutions that made this thesis a reality. It has been intensive years of hard working, isolation, patience and optimism and my research project would not have been achievable without the support of many generous and honest people around me.

I am hugely thankful to my supervisors Professor Isabelle Szmigin and Dr. Caroline Moraes for their great care, patience and unlimited support. I have been very fortunate to have them behind me with their best efforts and attention. They were always available inspiring me to keep hard working and challenge my taken-for-granted assumptions. They have helped me enormously to improve many of the best ideas in this thesis. My frequent supervisory meetings with them were very helpful. I am hugely thankful to them since they sacrificed a great deal of commitments for this project. Also, I have to thank Dr. Nina Michaelidou who supervised me during the initial two years of the programme and I wish her all the best in her career life at another Institution. I want to thank many people at the University of Birmingham and our friendly staff at the Research Office in the Business School. I also have to thank many friends with special thanks to postgraduates who have been my neighbours inspiring each other through enjoyable chats and constructive feedback in the 10th floor of Muirhead Tower building. I want also to thank all the interviewees that took part and gave up their time to help me with my project. I want to thank 'King Abdullah Scholarship Programme' which sponsored and funded me and thousands of fellow citizens and I find myself indebted to my country.

I want to acknowledge many members from my extended family and friends who have been always there for me when I needed them. I am hugely grateful to my charming wife Eaman and my humorous Son Hashim who both took most of the family scarification for the successful completion of my research project and went through long years of patience and abuse of family commitments. They always make me cheerful and bring my soul to the beauty of life after a long hard working day. I want to thank my parents for their love, patience and ongoing encouragement. They have sacrificed so much and waited years for me to finish my programme and come home. I want to send prayers to the soul of my father who recently passed away. It is less than two months and I still miss him so much. I cannot imagine my life without you my dad but I know I was so fortunate to say Goodbye to you. You are my guardian angel and I acknowledge that without your prayers I would not be able to finish my project. I wish to extend my thanks to all my brothers, sisters and cousins at home and my great friends in Birmingham.

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CHAPTER ONE: INTRODUCTION

1.1 Research Background

Researchers' focus on consumers' decisions used to be consistent with the perception of consumers as passive players in society and the market. The literature on consumer behaviour is preoccupied with research on how consumers' decisions are influenced by different factors such as social class (Allen, 2002; Wallendorf, 2001), gender (Bristor and Fischer, 1993; Fischer and Arnold, 1990; Thompson, 1996), ethnicity (Belk, 1992; Mehta and Belk, 1991), family and other groups (Wallendorf and Arnould, 1991; Ward and Reingen, 1990). However, several scholars have questioned research that focuses on how consumers make decisions regarding what they consume rather than on what they do with their consumption (Arnould and Thompson, 2005; Firat and Venkatesh, 1995; Holt, 1995; Xie et al., 2008).

Consumers were historically viewed as passive receivers of goods and services produced by firms. On this basis, it is not unusual in consumer research to address consumption within the context of a conflicting relationship between powerful producers and resisting consumers. Such conflict between consumers and producers may evolve, as consumers attempt to determine their consumer rights, or improve their trading conditions within the marketplace (Grønmo and Olander, 1991). This conflicting relationship between consumers and producers may also emerge in society. For example, some people in society may perceive consumption as a harmful behaviour which causes major environmental damage (Myers and Kent, 2002), and associate it with the destruction of resources (i.e. goods) in society (Firat and Venkatesh, 1995). Nonetheless, some consumer researchers have illuminated our understanding of consumption as a cultural and creative behaviour that operates beyond the so called destruction of goods.

Several scholars call for a comprehensive understanding of consumption in line with the development of consumer culture over the last twenty years of academic research (Firat and Venkatesh, 1995; Arnould and Thompson, 2005). For example, Thompson (2011) encourages researchers to understand consumption as a political and moral practise. Thompson (2011) refers to many practices of contemporary consumption (e.g. buying fair trade products, buying of recyclable products) which in his views represent an explicit values-based, and a politicised understanding of consumption. Thompson (2011) considers consumers who get involved in some practices of consumption such as buying fair trade products as 'voters' who choose to reject the domination of marketers and impose social change through moral practices in the marketplace. Other researchers such as Ferreira and Scaraboto (2016) focus on a collective rather than an individual understanding of consumption. Ferreira and Scaraboto (2016) remind us of the cultural process by which consumers in online communities of consumption shape their identities through the consumption of materiality. Ferreira and Scaraboto (2016) suggest that some consumers in these communities get engaged in a collective action which forms consumer identities and enrich consumer culture. Thompson (2011) and Ferreira and Scaraboto (2016) are just few examples which remind us of some of the changes in contemporary practices of consumption by individuals and groups of consumers in society.

Generally, a recent understanding of consumption often turn attention to the cultural and creative behaviour of consumers in the marketplace (Burroughs and Mick, 2004; Holt, 1995; Moreau and Dahl, 2005). According to Holt (1995, p. 2), consumers use material objects (e.g. goods, products) as "vessels of cultural and personal meanings". According to this evolving perception of consumption, consumers are producers of diverse creative and cultural meanings (Arnould and Thompson, 2005) which may not be similar across all

consumers (Holt, 1995). Also, consumers are constant producers not only in public spaces or their places of work (e.g. factory, office), but also during their consumption in the marketplaces (Firat and Venkatesh; 1995). Therefore, such evolving perception of consumption in consumer culture research highlights a new perspective in which consumers can be viewed as productive players through the production of cultural and creative meanings in society and the marketplace.

Most recently, marketing scholars also focus on consumers as productive players through their participation with firms as well as other peer consumers. Many researchers have acknowledged the role of consumers as participants in the production of goods and services supplied to them by firms (Vargo and Lusch, 2004; Prahalad and Ramaswamy, 2004; Grönroos, 2012). Vargo and Lusch (2004), lead such thinking of consumers as constant and participant producers with firms that supply them with products and services. Many works by Vargo and Lusch (2004, 2008) note that most consumers are no longer satisfied by a dominant view of goods as products for exchange. Rather, Vargo and Lusch (2004, p.8) argue that consumers are more interested in goods as “distribution mechanisms for service provision”. Such evolving dominant service logic of marketing then would reverse our thinking of a commercial service as a type of intangible products but rather enable us to think of a tangible product as a type of services. For instance, a consumer would be more interested in buying an automobile as a ‘service for transport’, buying a mobile gadget as ‘a service for communication’, and buying a game box as a ‘service for entertainment’.

While many of the traditional exchanges take place between many consumers and marketers across different sectors in the marketplace, the goods view looks insufficient to include the core benefits of the transactions between consumers and marketing (Grönroos, 1997). This means that many consumers will endeavour to participate actively with firms for

the sake of a good service delivery that is tailored to their own needs rather than let firms supply them with mass consumer products. Indeed, it is observed that many of today's companies engage in strategic alliances with other commercial suppliers in order to attract consumers' attention to their services. This can be observed in the telecommunication industry in the United Kingdom, for example, as many mobile phone service providers often engage with manufactures of smart mobile phones in order to challenge the traditional view of goods as products of exchange and attract customers (e.g. O2 and Apple alliance in a single service provision).

Other researchers have also acknowledged consumers' participation among themselves or between consumers and firms (Cova and Cova, 2002; Jenkins, 2006; Kozinets et al., 2008; Tapscott and Williams, 2006; Von Hippel, 2005). Within the context of innovation, Kozinets et al. (2008), show that networked groups of consumers use online communities to exchange their experiences, participate with each other and innovate new creative and collective projects. Kozinets et al. (2008, p. 345) name and describe four online consumer communities based on creativity "Crowds", "Hives", "Mobs" and "Swarms". They describe Crowds as large organised groups of consumers who work online on a collective project on a temporary or short-term basis (e.g. creation of a single video or boycotting a particular organization). Kozinets et al. (2008) consider Crowds as the lowest innovative groups in comparison to Hives whose members contribute a greater innovation to their communities (e.g. production of episodic videos on YouTube). According to Kozinets et al. (2008), both Mobs and Swarms are driven by experienced contributors but Swarms are more self-organised groups of consumers since participation by members takes a more systematic way such as the case with innovative contributions (e.g. rating, commenting, ranking) in many giant online sites (e.g. Amazon, google, Wikipedia). This means that Swarms offer the

lowest concentration of innovation by the largest number of contributors while Mobs offer the highest concentration of innovation by a fewer number of experienced contributors. This typology of online consumer communities by Kozinets et al. (2008) enable us to understand the potential of consumer-to-consumer relationships beyond current focus by many researches on consumer-to-marketer relationships.

Fuller et al. (2008), similar to Kozinets et al. (2008), have also conducted a research on online creative consumer communities. However, their research is focused on a specific type of consumer communities (i.e. brand communities). The results from their research shows that consumers of brand communities are more enthusiastic to participate as innovators to open projects. Likewise, Von Hippel (2005) also refer to the participation of consumers in the context of innovation, but he focuses on consumers as participant innovators among themselves and companies in the marketplace. Von Hippel (2005) views consumers' innovation with producers as evidences of rapid rise of democracy in the marketplace and society. Von Hippel (2005) remarks such a new brave world of innovation among consumers and producers as a trend towards communal benefits for all consumers and companies. Von Hippel (2005) encourages individuals in society to join this emergent user-centred innovation and suggest that lead participants (consumers and firms) often become a head on marketplace trends or emerge as leaders in commerce.

All the examples of works by Grönroos (1997), Vargo and Lusch (2004), Kozinets et al. (2008) and Von Hippel (2005) demonstrate consumption as a practice of production and consumers as producers who frequently choose to become active participants through their roles in the marketplace with other consumers and firms, and not merely through the production of cultural and creative meanings in society. However, one of the most important implications of consumers' roles as participants in the marketplace is the conceptual

challenge to maintain the distinction between consumers and producers, particularly in cyberspace (Alhashem et al., 2013; Firat and Venkatesh, 1995; Ritzer, 2013; Ritzer and Jurgenson, 2010;). In light of technological developments and what they have meant to markets and societies, for instance, consumers' practices in cyberspace (e.g., in online communities) can be viewed as value-creation with other consumers and this also involves production (Harwood and Garry, 2010). This individual and collective participation of consumers challenges our traditional understanding of capitalism in which production was largely managed by private firms and associated with profits (Ritzer and Jurgenson, 2010).

Consumers today spend significant portions of their time browsing and using the internet for various purposes, including shopping and market-oriented activities. The work by Kozinets et al. (2008) is a good example to demonstrate how individual consumers can collectively become creators of value through their participation in online communities. This demonstrates that individual consumers can become creators of value through their participation with other consumers, and not merely through consumption of the value provided by firms. But this raises a question of whether participation among consumers should be distinguished from their participation with firms (i.e. producers) since some researchers such as Ritzer and Jurgenson (2010) refer to such convergence of the roles of consumers and prosumers as a new capitalism by which individual consumers are abused through their production.

Historically, Toffler (1981) coined 'prosumption' as the convergence of consumption and production about three decades ago but he failed to turn researchers' attention to the popularity of this practice in the academic circles (Ritzer, 2013). Indeed, researchers started to turn their attention most recently to prosumption and the emergent roles of prosumers especially in the series of works by Ritzer and his colleagues (e.g. Ritzer and Jurgenson,

2010; Ritzer et al., 2012; and Ritzer, 2013). Prosumption is tentatively adopted from Xie et al. (2008, p.110) and defined as “value creation activities undertaken by the consumer that result in the production of products they eventually consume and that become their consumption experiences.” Consequently, this definition by Xie et al. (2008) enable us to understand prosumption as a practice which requires the production of goods and services by consumers who consume them as alternatives to those available in the marketplace. Also, the same definition by Xie et al. (2008) enable us to understand prosumers as a segment of consumers who choose to become producers through their involvement with the production of some or many of their products.

The above definitions of prosumption and prosumers are not decisive. Rather, such definitions are offered to help introduce the research since this thesis also aims to provide a refined understanding of prosumption. Noteworthy to mention, prosumption is also recently becoming popular in the context of energy markets and power generation systems (see e.g. Lampropoulos et al., 2010; Schleicher-Tappeser, 2012). However, prosumption as a special electric technology used in the power market is beyond the purpose of this thesis. Overall, the present research seeks to address the call for theoretical and empirical work to contribute to the on-going evolution of consumer roles and participation in the marketplace.

Prosumption (Toffler, 1981) is one such a practice which is increasingly associated in marketing mostly with consumer empowerment rather than consumer exploitation (Alhashem et al., 2013). But it is essential to note here that there are three discourses of consumer empowerment that can be derived from an integrative conceptual map for consumer power models in marketing and consumer research as proposed by Denegri-Knott et al. (2006): empowerment through consumer freedom (derived from consumer sovereignty power model), empowerment through consumer resistance (derived from

cultural power model) and empowerment through consumer productivity (derived from discursive power model). These discourses of consumer empowerment will be discussed in details in chapter three. However, it is argued that the third discourse of consumer empowerment is more consistent with prosumption as a potential practice for consumer empowerment.

In brief, prosumption is not an act by firms to empower consumers as proposed in the first discourse of empowerment neither it is an extreme form of resistance to consumption and consumer culture as advocated in the second discourse of empowerment. Empowerment through consumer productivity enable us to view prosumption as a discursive practice that empower consumers through becoming producers of their own products or/and collaborating with other peer producers. As discussed in the data findings, prosumers refer to how they can make some of the products they consume rather than purchase them from the marketplace. The production of some of these products shows that prosumers are not extreme opponents of consumer culture since they themselves like to consume materials for their individual projects. Nonetheless, prosumers unlike mainstream consumers are aware of their subjective ability to become producers for some of the products they need for consumption. This suggest that prosumers challenge knowledge and assumptions which are dominant in terms of mainstream consumption. The remainder of this chapter respectively presents the research problem and its significance, as well as the research purpose, context and questions. A description of the chapters is also presented below.

1.2 Research Problem

There are several conceptual and practical issues concerning researchers' understanding of prosumption and the role of prosumers. These are gaps in the marketing and consumer literature which the present thesis seeks to address. There is a growing interest in empirical

works which may help to demonstrate the nature of prosumption (e.g. Wolf and McQuitty, 2011; Xie et al., 2008). Yet, a clear understanding of prosumption is still missing. Prosumption has only recently emerged as an interesting area in the marketing and consumer literature. On this basis, empirical research is needed to illuminate our understanding of prosumption and prosumer behaviour. From a theoretical perspective, several researchers such as Zwick et al. (2008), Ritzer and Jurgenson, (2010) refer to prosumption as the convergence of consumption and production. But, there is still a need in marketing for practical examples which demonstrate the nature of prosumption. For example, little is known about how individual consumers can combine consumption with production and assume independent production of products and/or services. Likewise, little is known about how consumers benefit from their involvement as prosumers.

Xie et al. (2008) describe individual prosumers as consumers who get involved in a variety of activities in order to become producers of some of their products. In their study, they refer to prosumers who prepare their own food through purchasing ingredients rather than purchasing ready-made food from the marketplace. It is likely that many mainstream consumers prefer to prepare their own food. But there are probably relevant examples which offer better illustrations of how prosumers behave differently from mainstream consumers in other domains of the marketplace. For example, some customers of hardware/home improvement shops in the UK (e.g. B&Q, Homebase, Focus and Wickes) can be understood as prosumers since they prefer to make some of their products without the aid of professionals or the purchase of final products from the marketplace. Those consumers often consume materials from the marketplace but get themselves involved in many demanding activities such as building, modifying and using materials for the purpose of their individual projects. Xie et al. (2008) also recognise that individual prosumers combine many

resources such as time, money, efforts and skills in their experiences. In this manner prosumption can be viewed as a practice by which individual consumers combine diverse resources and become producers for some of their products.

Prosumption requires high involvement from prosumers to go beyond the customisation of final products since prosumers combine resources in order to produce the products they eventually consume as described in the existing literature (Wolf and McQuitty, 2011; Xie et al., 2008). The significance of prosumption can be acknowledged at a collective level of consumption. For example, prior work on prosumption focuses on how consumers in online communities participate as groups, and contribute to the collective value for communal consumption (e.g. Cova et al., 2007; Kozinets et al., 2008). Such collective gatherings of online consumers have been extensively researched in prior consumer and marketing literature (e.g. Bagozzi and Dholakia, 2002; Kozinets, 1999; Kozinets and Handelman, 1998). Many researchers have focused on these collective online gatherings as sites for communal consumption (Cova et al., 2007). Individual consumers often turn online to search for information and seek advice from other peer consumers for many of their market-oriented and shopping decisions. Building on the above discussion, consumers who participate in online communities can be also understood as co-prosumers of collective value with other peer prosumers.

There are few empirical examples of prosumption in the literature of consumer research. Yet, prosumption is often viewed as a practice of consumer empowerment. For example, Wolf and McQuitty (2011) consider consumers' engagement with do-it-yourself (hereafter DIY) activities as prosumption and suggest that DIY consumers may achieve a sense of individual empowerment through their individual projects. Few others have focused on the empowering potential of prosumption and acknowledged the significance of collective

prosumer behaviour (Cova and Pace, 2006; Jarrett, 2003; Moraes et al., 2010; Shaw et al., 2006) with more or less explicit references to presumption in online communities (Kozinets et al., 2008; Ravid et al., 2008). Nevertheless, researchers need to understand how empowerment is perceived from the perspective of prosumers. This may be due to the perception of empowerment as a controversial theme in marketing which is often associated with the power struggle between consumers and producers (i.e. marketers) probably in the same way such power struggle has been debated between citizens and governments, and employees and their employers. Some researchers such as Zwick et al. (2008) argue that consumer empowerment is a new tool to discipline consumers and put them to get them involved through the production for the advantage of firms. In contrast to this view by Zwick et al. (2008), other researchers such as Pires et al. (2006) argue that consumer empowerment is such an undesired product of marketing which implies that it is not in the intention of marketers to empower consumers. Rather, this view by Pires et al. (2006) appears to be more consistent with a shift of power from producers to consumers as often suggested in the literature of online consumer power. On this basis, some researchers have suggested that consumer empowerment is also paralleled with problematic types of exploitation of the immaterial labour performed by online consumers since they use a community platform for their participation (Comor, 2011; Cova et al., 2011; Ritzer and Jurgenson, 2010; Scholz, 2012; Terranova, 2000; Zwick et al., 2008). However, consumer empowerment here refers to “the expansion of someone’s ability to make [choices in a context e.g. the market] where this ability was previously denied to him/her” (Santillan et al., 2004, p.535). This definition of consumer empowerment should help us to understand how prosumers are empowered through their involvement with production.

Consumer researchers have sought to understand how consumers (i.e. prosumers) perceive empowerment through collective participation (Jarrett, 2003; Denegri-Knott et al., 2006). Consumers' participation in online communities is largely presented in the consumer literature as a practice of labour exploitation by firms more than a practice of consumer empowerment. Nonetheless, much of the consumer empowerment/exploitation argument is related to interchangeable use of prosumption with other closely-related practices in marketing. Prosumption has been conceptually equated to a similar practice known as consumer co-creation (e.g. Zwick et al., 2008; Ritzer and Jurgenson, 2010). Consumers' participation through co-creation or prosumption is equally used in the literature to refer to customer joint production with firms as suggested by Meuter and Bitner (1998). Consequently, prosumption and co-creation have been viewed as practices which are consistent with customer exploitation by firms. Many researchers equate prosumption with consumer co-creation and consequently suggest that firms empower their consumer on one side and exploit their participation on the other side (Bonsu and Darmody, 2008; Comor, 2011; Cova et al., 2011; Ritzer and Jurgenson, 2010; Scholz, 2012; Terranova, 2000; Zwick et al., 2008). However, it is the main argument in this thesis that prosumption is not just another synonym for consumer co-creation. As shown throughout the literature chapters in this thesis.

Bonsu and Darmody (2008) explore the practice of co-creation in Second Life, a 3D virtual community, and suggest that consumers as co-creators with a commercial online firm are empowered in a diversity of ways but they are also disciplined to produce for the firm. Overall, the above cited works are just few examples which illustrate how consumer participation as co-creators with firms at once empower and discipline consumers. The literature demonstrates that prosumption is almost reverse rather than an equivalent practice

to consumer co-creation. Prosumers assume full management over their consumption experiences while co-creators only assume partial management and often assist firms to manage their customers. Furthermore, delegating more control to consumers is perceived central to the dominant understanding of consumer empowerment in marketing (Wathieu et al., 2002), but much of this understanding is aligned with the perspectives of firms rather than consumers (i.e. or prosumers).

1.3 Research Purpose, Context and Questions

The main purpose of the present research is to explore the nature of an emerging practice known as 'prosumption', and interrogate its potential as a practice which empowers consumers in an online community. On this basis, Instructables was purposefully selected as it was considered the most appropriate online community for understanding prosumer behaviour. Instructables is an online community that encourages its members to publish and share their individual projects with other peers in the community, which in turn is in line with the practices of prosumers. From an empirical perspective, Instructables offers a site in which it demonstrates the nature of prosumption through varied prosumer experiences with rich textual and visual data. Thus, in the present study Instructables is used as the context in which prosumption emerges as individual, peer-to-peer and collective practice of prosumption.

The following research questions have been formulated in order to offer direction and focus for the main purpose of the research:

Q.1) How do individual consumers emerge as prosumers through the use of products (e.g. goods and services) as resources? The answer to this question enable us to understand the nature of prosumption and might contribute useful insights to some theoretical debates and

confusion regarding the roles of prosumers and other closely related roles (mainly the role of the consumer as a co-creator). Is prosumption and the emergence of prosumers a new road to marketing as proposed by Cova and Cova (2012) or is it such that prosumption was always the norm and consumers were always prosumers as argued by Ritzer (2013)?

Q.2) How does an individual prosumer benefit from prosumption? The answer to this question also enable us to expand on the nature of prosumption in terms of the benefits to prosumers. It offers an alternative or a complementary enquiry to the theoretical attempt by Xie et al., (2008) to understand prosumption as a motivational behaviour. The work by Xie et al., (2008) in terms of understanding prosumption as a theory of trying (e.g. consumers trying to prosume) lack the foundation in such that how consumers in the first place benefit from prosumption. Xie et al., (2008) based on a quantitative method have attempted to operationalise the concept of prosumption through a number of hypothesis in the context of food prosumption. Nonetheless, more qualitative research is needed to explore in-depth the nature of prosumption especially as Xie et al. (2008) clearly equate prosumption to consumer co-creation.

Q.3) How do prosumers perceive firms and commercial products in the marketplace? This seems an important question that might help us to understand how prosumers can be distinguished from mainstream consumers including consumer co-creators. Prosumers are not the norm in the marketplace but they are nonetheless a group of consumers who are often theorised as consumers who use resources to create desired products (Kotler, P., 1986; Wolf and McQuitty, 2011).

Q.4) How does prosumption empower prosumers in the marketplace and society (e.g. life projects, personality)? Prosumption as a practice that combines both consumption and

production (Toffler, 1981) implies a discourse of power (i.e. a source of discursive power) through such consumer productivity. However, some researchers argue that consumer productivity could be also a source of consumer exploitation especially in the internet as proposed by Terranova (2000) and Franke and Piller (2004).

Q.5) How do peer-to-peer and collective co-prosumption emerge in Instructables? Arguably, those researchers who equates prosumption to consumer co-creation often neglect the nature of relationships in prosumption as a potential practice by prosumers alone or with other prosumers. So, is prosumption only a manifestation of a consumer-to-firm relationship as proposed by some researchers such as Zwick et al. (2008) who view prosumption nothing more than a tautological term gaining more attention with the advent of the internet but they miss this point of prosumption becoming popular in social spaces other than marketing such as politics, arts, psychology and sociology (Fuchs, 2011; HersHKovitz, 2011; Nakajima, 2011; Shaw and Benkler, 2012). Indeed, some researchers such as Humphreys and Grayson (2008) inspire us to think of prosumption as a practice by consumers alone or through collaborations with other consumers.

Q.6) How do prosumers experience collective empowerment in Instructables? Prosumption is frequently manifested as a form of consumer productive in a digital space of consumption. So, once again those researchers who equates prosumption to consumer co-creation often neglect the importance of space (i.e. context) of consumption. For example, Ritzer and Jurgenson (2010) seems to acknowledge prosumption in a digital space of consumption (or prosumption) as semantically theorised in their conceptualisation of a new emerging prosumer capitalist society. Arguably, prosumption can also manifest as a form of consumer productivity in offline communities as proposed by Campbell (2005) and Wolf and McQuitty. Foucault (1977), though his works on power, inspire us to rethink the space of consumption

as a space that have been constituted through the exercise of relational power/ knowledge. In this sense, prosumption can be understood as a practice by which peer-to-peer consumers attempt to legalise new actions through discursive practices in order to affect or modify the market as a field of action.

1.4 Significance of the Research Problem

An understanding of the nature of prosumption and its empowerment potential is important in that it allows us to understand the implications associated with consumers' participation in the production of products through their relationships with marketers or/and peer consumers. Many researchers continue to assume that prosumption is problematic since it requires the exploitation of consumers as co-producers of value with firms. For example, Ritzer (2013) suggests that prosumers create value for firms every day from clearing their own tables to putting furniture together while those prosumers are paid nothing by commercial organisations. Nonetheless, such work by Ritzer (2013) is very likely more descriptive of the roles of co-creator consumers rather than prosumers. Central to the argument in this thesis, there are critical differences between the roles of co-creators and the roles of prosumers (Alhashem, 2013). Indeed, limited attention has been given to distinguish the role of prosumers from closely-related roles such as co-creators (e.g. Humphreys and Grayson, 2008). But this thesis highlights the practical differences between these two roles and illuminates the extent to which prosumers are empowered through their prosumption or participation with other peer co-prosumers.

Consumers who get involved in the practice of prosumption choose to become prosumers through the production of some or many of the products that enter their consumption (Kotler, 1986). This means that by becoming a prosumer, someone is deciding to become more involved in their consumption experiences rather than relying on commercial suppliers or

becoming a co-creative producer with a company. Consequently, it could be argued that prosumption as a practice might be more consistent with consumer empowerment than other co-creative practices since prosumers gain more self-dependence (or self-sufficiency) for the products or services they would otherwise purchase from the marketplace or create through direct collaboration with producers. Furthermore, it might be argued that prosumers become less susceptible to exploitation by companies than co-creator consumers since prosumers reduce dependence on commercial offerings. This argument about potential exploitation of consumers is not an attempt to demonise the practices of agents in the marketplace (e.g. retailers, suppliers, producers, marketers, manufacturers) or implying that those companies necessarily intend to create value out of relationships with the consumer. But this might refer to the nature of modern capitalism as many researchers problematise how companies capitalise on consumers as a competitive advantage to put them ahead of competitors.

Toffler (1980) predicted that people would start to become more involved as prosumers and invest much of their efforts away from traditional commercial exchange. Kotler (1986) also acknowledged the rise in prosumption as a challenging movement to marketers and agreed with Toffler (1980) that it would put key limitations on the scope of marketing. The work by Kotler (1986) in line with Toffler (1980), provides a useful point to understand the significance of prosumption and imagine the extent to which most of today's consumers have reached. Nonetheless, it should be noted here that the rise of the role of the prosumer and its potential as an empowering practice is not an attempt to reject traditional notions of 'consumers', 'producers' and 'professional firms'. The use of these terms in marketing continues to dominate many of today's mainstream markets as well as the academic literature of marketing and consumer research.

The significance of prosumption is increasingly becoming evident in many contexts of research. Recently, many researchers have contextualised their works on prosumption in contexts such as consumer psychology (Denegri-Knott and Molesworth, 2010), sociology (Fuchs, 2011) arts (Nakajima, 2011) and politics (HersHKovitz, 2011; Shaw and Benkler, 2012), with marketing researchers such as Cova and Cova (2012), Ritzer et al. (2012), Ritzer and Jurgenson (2010), and Cova et al. (2011) suggesting that prosumption will soon shape the new face of marketing. This range of areas in which prosumption is researched supports the notion of an emerging prosumer society. Researchers have situated their works on prosumption in topical areas such as cultural and digital consumption (Cole, 2011; Comor, 2011; Magaudda, 2011; Recuber, 2012), e-commerce and consumption (Denegri-Knott and Molesworth, 2010; Denegri-Knott and Zwick, 2012; Laughey, 2010), social media, blogging and user-generated content (Chia, 2011; Chu, 2010; Davis, 2012; DesAutels, 2011; Rey, 2012; Woermann, 2012), as well as branding and fandom culture (Guschwan, 2012; Harrington et al., 2011; Pitt et al., 2006). This widespread use of prosumption across disciplines and many research contexts may suggest it is more widely accepted and regarded relevant than consumer co-creation. It also demonstrates the significance of prosumption as a practice which is more consistent with people's participation in fields other than the marketplace as indicated in the examples from the literature above.

The significance of this research also lies in its potential ability to clarify some of the critical distinctions between co-creation and prosumption. The relationship between co-creation and prosumption can be viewed as a continuum which emphasises prosumption as a more beneficial kind of valorisation of immaterial labour than that which exists in contexts of co-creation. It is not suggested that prosumption is completely free from market-based power relations, but rather that it is a more ideal way to value the invisible work produced by

consumers (Scholz, 2012). Another potential contribution of this research is its presentation of empirical research findings which exemplify the nature of prosumption through a specific online community. In this way, this thesis furthers research and analysis in the areas of collaboration among and between consumers and producers. Such contributions may allow marketers to assess how they can engage with such consumers in nuanced ways; in prosumption-enabling ways which are in line with their firms' specific goals. It is in the interest of firms to care about prosumers because if firms are to engage with such market stakeholders they must do so by acting as enablers of prosumption activities.

1.5 Outline of the Thesis

The thesis is organised into nine chapters. The present chapter offers a background to the research and is then followed by an explanation of the research problem, its purpose, context, and research questions, significance of the research problem, and an outline of the thesis. Chapters two and three offer updated reviews of relevant literature. Chapter two mainly traces and employs the literature from individual to collective consumption in consumer and marketing research in order to develop a theoretical understanding of prosumption. In addition to the prosumption literature, the role of individual prosumers as participants in the marketplace is discussed from the perspective of two relevant research directions: the consumer as a producer and the consumer as an integrator of resources. Collective prosumption is addressed from the perspective of the communal, tribal and collaborative consumption literature in the contexts of offline and online consumer communities. However, the chapter focuses on the significance of online communities as prosumption enablers. Finally, the chapter introduces and conceptualises prosumption as a practice of consumer empowerment. The main contribution of this chapter is the

development of a definition of prosumption and the distinction between prosumer and co-creator roles.

Chapter three explores the literature on consumer empowerment in marketing in addition to addressing the literature on power and empowerment in social sciences. It is important to link any observation of empowerment to a theory of power (i.e. consumer power) (Batliwala, 2007; Boje and Rosile, 2001; Cunningham et al., 1996; Denegri-Knott et al., 2006; Tew, 2006). To understand, organise and evaluate the directions of research on consumer empowerment, this chapter has employed map of consumer power suggested by Denegri-Knott et al. (2006) in addition to other conceptual works in the literature of power and empowerment (e.g. Lukes, 2005; Tew, 2006). This leads to conceptualising consumer empowerment in marketing in three research directions: empowerment through consumer sovereignty, empowerment through consumer resistance, and empowerment through consumer productivity. On this basis, the chapter offers an argument in order to conceptualise, choose and adopt a direction of consumer empowerment which corresponds with prosumption. By doing so, this chapter offers a theoretical reference to the perception of prosumption as a practice of consumer empowerment.

Chapter four explains the adopted research approach with its theoretical perspective, including ontological and epistemological assumptions. Then, the chapter progresses to the justification of the research methods which have been used, from the selection of the netnographic fieldwork (i.e. the selection of the online community) to data collection and analysis, to ensuring ethical requirements and evaluation of findings. The research is aligned with interpretivism as the overall perspective to offer theoretical and methodological guidance for the primary research as well as the researcher's position. Netnography (Kozinets, 2002; 2010) or virtual ethnography (Hine, 2000; Kozinets, 2002, 2010) was

adopted and integrated with a template analysis method (King, 2005) in order to manage and execute the primary research. Furthermore, the netnographic method for the present study has been extended beyond the observation of textual discourse to encompass online data collection of prosumer-generated visual representations of prosumption.

Chapters five, six and seven offer an analysis of findings and answers to the research questions of the empirical study. Chapter five mainly focuses on analysing the individualised experiences of prosumers in the online community Instructables which has been identified and selected for the present study. Much of the analysis in this chapter focuses on the individual experiences of prosumers as the units of analysis. On this basis, this chapter offers answers to research questions one and two. The chapter offers empirical evidence on prosumption as a convergence of consumption and production as suggested by the literature (Toffler, 1980; Ritzer and Jurgenson, 2010) through the experiences of members in Instructables. The chapter also explains the overlapping personal, social, environmental and market-oriented benefits of prosumption.

Chapter six builds on the findings reported in chapter five and focuses on the analyses of prosumers' connection with the market. Similar to chapter five, much of the analysis in this chapter focuses on the individual experiences of prosumers as the units of analysis. However, this chapter focuses on examining prosumers' perceptions of firms and commercial products and on interrogating empowerment from the perspective of individual prosumers in the marketplace. The chapter offers answers to research questions three and four. The analysis of findings reports on prosumers' tendency to challenge constraints managed by firms over their commercial products. Prosumers perceive commercial products as resources that are open to modification in line with prosumers' projects, rather than the expectations set out by manufacturers (i.e. marketers). Also, the findings demonstrate that

prosumption offers prosumers a fundamental view on the product concept that goes beyond the mainstream consumption.

Chapter seven focuses on the analyses of peer-to-peer and individual-to-community interactions as the units of analysis. This chapter offers answers to research questions five and six. Analysis of findings illustrate that participation among members in Instructables emerges as sharing of experiences. Members share their individual projects to enhance their prosumer knowledge. Members also manage their experiences as sharers who inspire each other through a cycle of collective learning in the community. Collective empowerment is experienced in the community through validation and reproduction of individual experiences. Validation refers to how members evaluate an individual project in the community while reproduction refers to how members develop new projects through individual projects.

Chapters eight and nine offer discussions of findings and a conclusion of the thesis respectively. Chapter eight comprises a discussion of key findings alongside the existing literature on prosumption and prosumer empowerment. In line with the main purpose of this thesis, the chapter discusses three main theoretical contributions. First, a recap of the key findings from Instructables illustrate that prosumption can manifest as a convergence of material and digital prosumption together with an individual and collective participation. Individual prosumers primarily integrate their resources which eventually result in the production of material products for their own use. Based on their involvement with material production, prosumers in Instructables are divided into four types: assemblers, modifiers, artists and inventors. But those individual prosumers also participate with other peers as co-prosumers of value in the community through sharing their experiences. Therefore, the exemplar of Instructables contributes insights by demonstrating the multidimensional nature

of prosumption. Second, the example of Instructables clarifies the critical distinctions between co-creation and prosumption, which highlight prosumption as a more ideal type of valorisation of immaterial labour. Third, prosumers inspire each other through a cycle of individual collective learning in the community. Therefore, the exemplar of Instructables contributes new insights into the existing literature on consumer empowerment through peer-to-peer education. Finally, chapter nine concludes the thesis by addressing its methodological and managerial contributions. The chapter offers concluding remarks alongside a brief discussion of recommendations, research limitations and further research.

1.6 Summary

This chapter offers a background and an overview of the thesis namely research background, research problem, research purpose, context and research questions, and significance of the research problem. This chapter also offers an outline of the thesis including an overall overview of its nine chapters respectively.

Marketers historically considered consumers as passive receivers of goods and services produced by firms. On this basis, marketing and consumer researchers frequently address consumption as a conflicting relationship between powerful producers and resisting consumers. However, many scholars recently suggest that such conflicting relationship between consumers and producers is no longer a reflection of most of the dominant consumption taking place in the marketplace. Those researchers view contemporary consumption as an act of creativity and cultural production which is instigated by active consumers in society and the marketplace. Other researches argue that it is increasingly becoming difficult to draw sharp lines between consumption and production, and consumers

and producers. Therefore, some leading firms in today's mainstream markets focus on consumers as productive players who participate with firms or with other peer consumers.

Toffler (1980) predicted that consumption will get merged with production in what he called as 'prosumption'. His prediction is consistent with many of today's markets which are dominated by prosumption, rather than merely consumption or production. Nonetheless, it is not known how to distinguish prosumers from consumers and what makes production by consumers as participants with firms different than production as participation among peer consumers. Consequently, the main purpose of this thesis is to demonstrate the nature of an emerging practice known as 'prosumption' and interrogate its potential as a practice which empowers consumers in an online community. This thesis is guided by some debate about the potential of prosumption as a practice of consumer empowerment or exploitation. The theoretical findings from the literature demonstrate that prosumption is a reverse rather than an equivalent practice to consumer co-creation. Additionally, the empirical findings demonstrate the nature of prosumption and offer evidences of its potential as a practice of individual and collective empowerment. A distinction between prosumption and other practices help us to develop a better understanding of consumers as prosumers in a market which is increasingly viewed as a place for participation among and between consumers and producers.

CHAPTER TWO: CONSUMER PRODUCTIVITY AND COLLECTIVE PROSUMPTION

2.1 Introduction

Consumers are increasingly theorised as producers on their own or through participation with firms and/or other consumers (e.g. Humphreys and Grayson, 2008) especially in online communities (Beer and Burrows, 2010; Ritzer and Jurgenson, 2010). From a theoretical perspective, consumer productivity is evident in many works in the consumer and marketing research. On this basis, this chapter reviews the literature on consumer productivity and collective consumption in order to develop a better understanding of prosumption and the emerging role of the prosumer.

The chapter begins by exploring individual prosumption mainly through consumers' participation in the marketplace within two particular roles: the consumer as a producer, and the consumer as an integrator of resources. This review will help to understand how some individual consumers have theoretically emerged as prosumers in today's marketplaces. Following that, prosumption will be compared to closely related practices (e.g. especially consumer co-creation) in order to develop a definition of prosumption for marketing and make a distinction between prosumer and co-creator roles. Following that, collective prosumption will be addressed in order to illustrate the significance of online communities as collective prosumption enablers.

2.2 Consumer Productivity

Toffler (1981) first referred to 'prosumption' to describe the practice by which individuals act as independent producers of their own goods and services rather than becoming customers of commercial suppliers. For example, Toffler (1981) referred to housewives as prosumers who produce services such as cooking, cleaning for their own consumption rather than purchasing such services from the marketplace. Kotler (1986) also acknowledged

prosumers as individuals who prefer producing their own goods and services. Thus, prosumers unlike consumers prefer to engage in doing things for themselves, rather than being committed to final offerings proposed by suppliers. Kotler (1986) argues that many individual prosumers today prefer to make some of their own goods and services (e.g. cooking food, repairing cars, and painting houses) without the aid of professionals or firms.

The prosumption references above illustrate that the birth of prosumers has been identified too long ago. Nonetheless, it is still early to label most of today's consumers as prosumers. Many if not most individuals today continue to purchase final market offerings from commercial suppliers. Some works by researchers help us to understand prosumption as a practice by which consumers use their skills to become producers of some of their goods and services. Campbell (2005) refers to 'craft consumption' as a skill which enable consumers to make homemade products for their consumption. The work by Campbell (2005) makes a distinction of the craft consumer from other classifications of consumers, namely 'dupes', 'rational heroes' and 'identity seekers' . Apart from the rational heroes and craft consumers, Campbell (2005) considers other classifications of consumers as dupes and identity seekers as victims of consumer culture. Campbell (2005) argues that both dupes and identity seeker consumers have been historically viewed in the marketplace as buyers of mass products which they did not even need such as aesthetical and standardised products.

In comparison to dupes and identity seekers as classifications of consumers, Campbell (2005) considers both rational heroes and craft consumers as balanced buyers who maximise utilities and reduce costs but he refers to craft consumers as the best classification of consumers who unlike the majority of buyers in the marketplace bring their identity into the products they use for their consumption. According to Campbell (2005), a craft consumer

is a skilful buyer who chooses to become responsible for the design of the products he consumes or the selection of the materials he would need for the production of a homemade product. Thus, in line with the views of Campbell (2005), prosumers can be viewed as a classification of consumers between rational heroes and craft consumers. However, this work by Campbell (2005) enables us to view craft consumers more consistent with prosumers who often use various skills including weaving, carving, making and similar skilful activities to turn raw materials into a product. Campbell (2005) describe craft consumption. Apart from the hero consumer who rationally allocates resources to maximise utilities and reduce costs, according to other notions dupes and identity seekers are viewed as victims of consumer culture. Prosumption through craft consumption was regarded as a prominent manifestation of genuine as a form of self-expression in society (e.g. painting, sculpture making) as consumers bring their identity into the material objects used for their consumption. Nonetheless, prosumption appear to go beyond self-expression in society since this practice is not only limited to 'hand-made products', 'art works' or other homemade products which require the investment of self into the products produced as suggested by Campbell (2005).

Wolf and McQuitty (2011), similar to Campbell (2005) also advance our understanding of prosumption as DIY consumption by which individual prosumers use their skills for the production of goods and services they eventually consume. Both works by Campbell (2005) and Wolf and McQuitty are just examples which illuminate our understanding of the notion of consumers becoming producers of some or many of their goods and services.

The rise of prosumption suggests that many consumers are increasingly becoming interested in the production of some of the goods and services entering their own consumption. This prompts the question of the extent to which consumers can become

prosumers and gain partial independence from marketing agents. Given that consumers have become dependent on a sophisticated production system managed by marketers (Kozinets, 2002), consumers have a very limited access to resources and mechanisms of production. So, this implies that consumers may never become fully emancipated from marketing agents. Indeed, much of the consumer literature reflects such consumer's dependence on marketing and many researchers have noted the rise in consumer activity within their relationships with corporations (e.g. Fitzsimmons, 1985; Gummesson, 1998; 2008; Lovelock and Young, 1979; Troye and Supphellen, 2012). Therefore, individual prosumption is essentially explored through the roles of individual consumers as participant producers with firms. This point is reflected in the literature on individual prosumption, which addresses how some consumers have become prosumers in today's marketplace. The notion of consumers becoming producers is evident in many works in the existing consumer behaviour and marketing literature. Such notion is referred to as 'consumer productivity' (Cova and Dalli, 2009) and explored within two particular roles: the consumer as a producer, and the consumer as an integrator of resources. Both of these roles of individual consumers are discussed below.

2.2.1 The Consumer as a Producer

Many researchers have noted the rise of the notion of 'consumer-producer' in their works (e.g. Firat and Venkatesh, 1993; Firat et al., 1995; Lengnick-Hall, 1996; Prahalad and Ramaswamy, 2000; Cova and Dalli, 2009). These researchers have questioned the notion of the consumer and argued that a consumer-producer dualism captures the essence of consumer behaviour. For example, Firat and Venkatesh (1995) examine consumption from a postmodern perspective and suggest that consumers are constant producers. According to Firat and Venkatesh (1995), consumption is a social interpretation by which consumers

create their mix of products, signs, symbols and meanings rather than merely making purchase decisions.

Similar to Firat and Venkatesh (1995), Holt (1995), uses an interpretive approach and proposes a typology of consumption as a practice used by consumers in a variety of ways beyond the economic maximisation of utility proposed in economic studies (e.g. Becker, 1965). Holt (1995) reports that consumers use consumption as experience, integration, classification and play. Consuming as experience refers to how consumers produce subjective and emotional reactions using consumption objects. Consuming-as-integration refers to how consumers produce meanings through the manipulation of consumption objects. Consuming-as-classification refers to how consumers produce cultural and personal meanings through the use of consumption objects. Finally, consumption-as-play refers to how consumers produce as play, through the connection with the other metaphors of consumption (experience, integration and classification). Thus, Holt (1995) enables us to understand consumption as a productive practice by which consumers act as producers of social identities for themselves and to communicate with others.

Consumer productivity has been also acknowledged in participation with service production. Other researchers have noted productivity of individual consumers within their participation in service-based markets (e.g. Bendapudi and Leone, 2003; Goodwin, 1988; Meuter and Bitner, 1998). The traditional distinction between goods and services in marketing has helped marketing scholars to perceive consumers as participant producers of services with firms (see e.g. Fitzsimmons, 1985). The distinction of services from goods based on their characteristics (Zeithaml et al., 1985) implies that participation is essential for any consumer to receive benefits associated with the purchased services. Simply stated, the production of

services unlike the production of goods requires consumers to interact with the manufacturing/marketing firms (Grönroos, 1997).

Individual consumers who participate in joint production with service firms are viewed as producers not only for themselves but also for services firms (Cova and Dallı, 2009). Researchers adopting this perspective of productive consumers have focused on the mutual advantage of engaging consumers in the production of services for both consumers and firms. For example, Dabholkar and Bagozzi (2002) examine the factors which drive consumers to become producers through using self-services (e.g. ATMs and technology-based services) rather than relying on customer services. They conclude that making enjoyable and effective self-service designs will minimise customers' waiting time and improve firms' management over their customers. Curran et al. (2003) examine other factors in order to understand consumers' willingness to use self-services, and suggest that consumers' negative feeling towards service employees will increase consumers' usage of self-services which in turn reduces costs for firms and increases customers' satisfaction. Van Raaij and Pruyn (1998) address how consumers' participation in the production of their service decreases bias towards service suppliers and positively influences consumers' evaluations of the outcome from their participation, which in turn increases consumers' satisfaction. Similarly, Bendapudi and Leone (2003) provide evidences for self-serving bias as consumers' participate in the production of services offered to them by firms. They suggest that companies who give consumers the choice to participate in self-servicing improves the outcome for both consumers and firms.

Overall, consumer productivity is a metaphor which refers to the creative or cultural production. Indeed, scholars who refer to such perspective of cultural or creative consumers associate production with a notion of consumption rather than a notion of production within

the factory. However, other researchers who refer to consumer productivity in terms of their participation with service providers perceive consumers in a manner which is more or less similar to labour work as producers within the factory. Participation from consumers is included as a component in the production structure of service firms. Thus, consumer productivity within service-production would be more relevant to the notion of prosumption and the prosumer role. This raises the question of whether consumers who participate within service-production can be viewed as prosumers. Consumer participation with service suppliers may not change their role as consumers since firms get paid and continue to do most of the work. Participant consumers continue to focus on their role as consumers who benefit from the market offerings supplied by service firms. Furthermore, firms continue to assume the responsibility, sponsorship and risk associated with the production and delivery of service to customers. It can be argued that consumer productivity as a participant may not be consistent with the original meaning of prosumption and the role of prosumers as proposed by Toffler (1980) and Kotler (1986). Prosumers as discussed earlier in Kotler's terms (1986) prefer to act as producers of their products and services rather than participate with commercial providers.

2.2.2 The Consumer as an Integrator of Resources

Another perspective of consumer productivity has emerged recently in consumers' role as integrators of resources. In marketing, Vargo and Lusch (2008) have recognised resource integration as a role of value co-creation within a marketplace that is dominated by the exchange of services more than the exchange of goods. Drawing from the S-D logic of marketing, Arnould (2008) suggests that individuals and households are like firms and can integrate resources as participant co-creators of their products and services (Arnould, 2008;

Vargo and Lusch, 2008). This perspective of consumer productivity, therefore, is more relevant to prosumption and the role of prosumers as producers of their products.

Such notion of the individual consumer as an integrator of resources is not entirely new. For example, Becker (1965) suggests that households play roles in the marketplace which maximise utilities and reduce costs in a manner which is similar to the traditional theory of the firm. The work by Becker (1965) focuses on the role of households as allocators of their working and consumption time in exchange for producing their commodities. In his view households are producers of commodities by combining (i.e. integrating) resources such as goods and time similar to the cost-minimisation rules applied by firms. Becker (1965) argues that a decline in the income of a household is correlated with a decline in the time spent at consumption activities, since time for consumption becomes more expensive to households. This indicates that consumers can allocate or reallocate resources and apply the same cost-minimisation basis employed by firms.

Consistent with later revisions on their service-dominant logic (hereafter S-D logic), Vargo and Lusch (2008, p, 9) suggest that “all social and economic actors are resource integrators”. Consequently, they agree with Arnould (2008) that individual consumers can be viewed equally as integrators of resources similar to firms in the marketplace. This implies that most consumers focus on using goods supplied by firms as service-based resources for value creation more than goods to be acquired for individual possession. This also means that consumers are constant integrators of resources who co-create value through the use of firms’ resources (Vargo and Lusch, 2008).

Lusch and Vargo (2006) acknowledge that their conceptualization of a service-dominated market has been overly oriented to a managerial (i.e. firms, marketing) rather than a

consumer perspective. This means that individual consumers are rarely described as dependant integrators of resources. Rather, consumers are largely viewed as integrators of resources who are only enabled to act on firms' resources. This illustrates that resources are needed in order for consumers to become producers of their products. It would be then easier to note that the nature of resources available to consumers go beyond the material (i.e. tangible) assets that are supplied by many home improvement stores for the use of consumers and businesses. This suggests that an individual consumer can be viewed as a producer of his products through the integration of diverse resources similar to firms.

Vargo and Lusch (2004) refer to two types of resources using ideas from Constantin and Lusch (1994) which are available to firms and customers: operand and operant resources. Constantin and Lusch (1994) associate the productive effect to the operant resources (e.g. knowledge and skills) which are used to perform an act on operand resources (e.g. materials). For example, an organisation such a public library may have operand resources such as building/space and books and operant resources such as staff and visitors. In this case, staff and visitors are perceived as operant resources because they can produce effect through acting on other operand resources. Operand resources therefore may include goods which can be changed in terms of their form, time, place and possession, while operant resources may include knowledge workers who can act on these operand resources as appliances and utilities (Vargo and Lusch, 2004).

Constantin and Lusch (1994) attempt to distinguish operand resources as finite and tangible as opposed to operant resources which are infinitive, invisible and intangible. The literature puts more focus on operant resources since these are perceived as the producers of effect. Hunt (2004) offers a useful review to help researchers understand the nature of operant resources and how these resources can be used to act on operand resources. He proposes

four categorisations of operant resources with exemplars which are typically used in the literature of business: human resources (e.g., the skills and knowledge of individuals), organizational resources (e.g., controls, routines, cultures, competences), informational resources (e.g., knowledge about market segments, competitors, and technology), and relational resources (e.g., relationships with competitors, suppliers, and customers). In this categorisation Hunt (2004) demonstrates the complicated nature of resource integration as applied by firms. This is consistent with the view of commercial products as outcomes of such integration of firms' resources as stated by Grönroos (1997, p.413) "A product is a result of how various resources, such as people, technologies, raw materials, knowledge and information have been managed so that a number of features that customers in target markets are looking for are incorporated into it. Thus, a product as a more or less pre-fabricated package of resources and features that is ready to be exchanged has evolved."

Such categorisations of firms' operant resource by Hunt (2004) combined with the description of products by Grönroos (1997) enable us to recognise individual consumers as integrators of their operand and operant resources. For the purpose of this thesis, therefore, operant resources which can be found relevant to consumers refer mainly to two types based on the suggestion by Hunt (2004); human resources (e.g., the skills and knowledge of a consumer) and relational resources (e.g., relationships with other peer consumers). Operand resources, however, refer to material objects available to prosumers (e.g. products, commodities) as theorised in many empirical studies in the resources literature (Baron and Harris, 2008, Arnould, 2006; Baron and Warnaby, 2011).

Several researchers, in line with Vargo and Lusch (2008) and Arnould (2008), have built on the theory of resource integration (e.g. Maglio and Spohrer, 2008; Kleinaltenkamp et al., 2012). But most of those researchers have adopted a firm rather than a consumer

orientation of resources' integration. Those researchers have focused on the role of the consumer as a resource integrator of his/her operant resources with the operand resources of firms (Baron and Harris, 2008; Baron and Warnaby, 2011; Hilton, 2008, Madhavaram and Hunt, 2008; Ngo and O'Cass, 2009). For example, Baron and Warnaby (2011) examine resource integration in an organisational context and conclude that consumers integrate their operant resources in partnership with the operand resources of an organisation (the British Library).

The above discussion demonstrates that the view of consumers as resource integrators has been limited to two assumptions. First, consumers are primarily integrators of operant resources since they lack access to operand resources. Second, firms are needed to manage consumers' use and integration of resources. Thus, the notion of consumers (individuals or groups) becoming producers of their products and services without the participation with firms has been greatly overlooked in the consumer and marketing literature. However, many existing consumer practices such as DIY, crafting, car modifying and home remodelling neither fit a firm-consumer co-creation model, nor require consumers to integrate their resources with firms. In a sense, these practices which often require the integration of consumer material resources with their skills replace the role of professional firms rather than participate with them. There are several noteworthy examples which demonstrate that some consumers can produce alternative products which replace those in the marketplace (Bekin et al., 2006; Campbell, 2005; Kozinets et al., 2008, Ravid et al., 2008). Additionally, there are other examples which suggest that consumers can also participate with other consumers in order to produce some of their products (Cova and White, 2010; Moraes et al., 2010; Ravid et al., 2008). So, these examples offer a view of

consumers as producers of their products on their own or through the participation with other consumers rather than the participation with firms.

Recently, Cova and Dalli (2009) have developed the concept of working consumers. They refer to multiple terms in marketing and consumer research to describe new consumer roles (e.g. prosumer, protagonist, post-consumer, consum'actor). They suggest a more active consumer who is engaged within productive relationships in the marketplace. But Cova and Dalli (2009) also view consumers as workers who can use their knowledge and competencies to act as producers alone, or with other customers or companies. This theorisation by Cova and Dalli (2009) of working consumers enables a new insight in which individual prosumers can be viewed as a segment of working consumers who like to produce some of their own products alone or through participation with other working consumers.

2.3 Defining Prosumption through Resources and Value

Prosumption is similar to other co-creative practices such as co-production and co-creation. All of these practices involve a degree of participation on the part of the consumer (Humphreys and Grayson, 2008) as an integrator of resources who can produce value alone or through participation with other players (i.e. companies or/and other consumers) (Vargo and Lusch, 2008). Nonetheless, one of the key arguments in this thesis is that prosumption is different from other practices since it revolves around consumers' ability to produce products for their own use, rather than the use of others. There are critical differences between prosumption, and other consumer co-creative practices (Alhashem et al., 2013). Such distinction may help to clarify the potential areas of participation among and between consumers and producers in terms of how co-creators and prosumers integrate resources and produce value.

Few researchers have explicitly referred to prosumption in line with the theoretical suggestion by Toffler (1980) and Kotler (1986) or referred to recent recognition by Ritzer and Jurgenson (2010). Xie et al. (2008) attempted to examine prosumption in line with the theoretical suggestion by Toffler (1980). They have attempted to explain why prosumers assume the role, risk, and responsibilities as producers of their products within the context of food. Xie et al. (2008) refer to some of the physical activities involved in prosumption (e.g. purchase of raw materials, moving, assorting and combining materials required for prosumers' projects) in addition to other mental activities (e.g. planning, evaluating and monitoring progress of the process) and outcome of prosumers' experiences in relation to others who benefit from them (e.g. family and friends). On this basis, prosumers, unlike consumers, can be viewed as value producers through the use of their resources, rather than co-creating value within the production resources of firms as suggested by Ritzer and Jurgenson (2010).

The term prosumer is used by Humphreys and Grayson (2008) as a direct link between production and consumption where the prosumer is producing exchange value (Marx, 1867). This suggests that consumers, through the production of exchange value, can be a source of free labour for companies. Examples of companies such as Threadless and Proctor and Gamble are frequently used in Humphreys and Grayson's (2008) discussion to emphasise that the consumer is engaged in producing exchange value for a commercial organisation. For Marx, exchange value is the worth of the commodity in relation to some other commodity, which in the west is usually money. This distinguishes exchange value from use value, which is the utility of the good to the person consuming it. Ritzer (2013, p.5) makes the point that Marx had been well aware that to create 'use value' some consumption must take place: "to be produced, a commodity must have a use value; a commodity will be

consumed only if it is useful". Yet Ritzer (2013) also reiterates that in Marx's labour theory of value, it is the production (i.e. the work or labour) that gives commodities their value. Whether this is done with a commercial organisation or not, the fact that a person is helping to create value is essential to an understanding of both prosumption and co-creation of value.

Modern consumers (or prosumers in Ritzer's terms) are engaged in creating value for companies every day, as Ritzer suggests, from clearing their own tables to putting furniture together. Ritzer (2013) notes that generally people are paid nothing by commercial organisations who profit from their unpaid work, but he suggests that few people would consider themselves exploited. While Ritzer (2013) acknowledges that a Marxist view would suggest such people are suffering a false consciousness, he is not sympathetic to this view and yet perhaps people should take a more critical stance on where and when they are required to be prosumers by companies. Certainly some companies have suggested that such 'self-service' prosumption impacts exchange value to the benefit of the consumer (e.g. Ryanair), but equally people should consider whether this also impacts the use value for some consumers.

Similar to Ritzer (2013), Scholz (2012) argues that Marx's ideas regarding the production of value and exploitation of labour may still be relevant to the digital economy, given the tensions that arise around issues of intellectual property, privacy, mediated culture and media literacy (Scholz, 2012). It is argued that such tensions emerge as people freely socialise, play and engage in poorly remunerated as well as unremunerated (immaterial) work under constant commercial surveillance on the internet, where what is seen is an intensified continuation, rather than a transformation, of the power and social relations of the traditional workplace (Scholz, 2012).

The discussion above also resonates with Beckett and Nayak (2008) who suggest that the rise of new technologies and methods for knowing and making the consumer visible (i.e. CRM) have enabled firms to govern consumers in a Foucauldian way; through a rationality which assumes that consumers want to participate to create value with companies. This is done not through the creation of an evil form of manipulation, but through normalised preferences and incentives for consumers to become manageable and behave according to the objectives of firms as proposed by Zwick et al. (2008). This in turn results in consumers who exercise their freedom in ways that are potentially beneficial to several market agents including consumers (Beckett and Nayak, 2008; Moraes et al., 2011).

Humphreys and Grayson (2008) suggest an important distinction, not made by other authors, in the value debate between collective and company-consumer production. Essentially they view consumers who participate with companies, whether paid or not, as being involved in company-consumer production and this produces exchange value as there is a commercial output. In contrast, collective production is about producing use value for a group of people. This is an important distinction in two ways. Firstly, up until their conclusion Humphreys and Grayson (2008) has emphasised that use value lay in the value in use by an individual, whereas their conclusion asserts it can be value for the group. Secondly, their distinction between collective and company-consumer production enables us to clearly understand the distinction between co-creation of value and prosumption, which is developed below.

Prosumption is characterised in this thesis as a production of use value by individuals alone or through co-production activities (i.e. peer-to-peer and collective group of consumers). Although Cova and Cova (2012) recognise that productive consumers can increase the value of a brand, their discussion does not focus on the distinctions between use and

exchange value and thus their conceptualisation of prosumption is different from the one adopted by other authors. Rather, and in line with Beckett and Nayak (2008), Cova and Cova (2012) focus on the idea of prosumers as supposed agents controlling their consumer destinies, but agents who are actually moulded by their very involvement in a commercial system of co-production. Their analysis implies the prosumer is a willing participant with business where the emphasis is on the satisfaction gained from creative consumption rather than production, reflecting Humphreys and Grayson's (2008) company-consumer production.

Ritzer's (2013) latest definition of prosumption is more all-encompassing than some previous others. He now refers to it as the "interrelated process of production and consumption" and eschews a production/consumption binary for a prosumption continuum where there is no pure consumption or production, as every act of production involves some consumption and vice-versa (Ritzer, 2013, p.1). Although it is semantically acceptable, Ritzer's (2013) emphasis is on how consumers are increasingly involved in the production process of companies. However, this thesis focuses on individual and collective prosumption by consumers. Thus the use of prosumption in this research builds on the definition proposed by Xie et al. (2008, p.110), who describe prosumption as "value creation activities undertaken by the consumer that result in the production of products they eventually consume and that become their consumption experiences". Nonetheless, such definition of prosumption by Xie et al. (2008) overlook some key elements in terms of our understanding of prosumption in light of the present consumer and marketing literature. Firstly, Xie et al. (2008) assume that prosumption is only an individualistic practice which neglect the potential of collective prosumption. Secondly, Xie et al. (2008) does not highlight the productive aspect of prosumption, and does not highlight the use of alternative products produced by

prosumers for their own consumption. Therefore, prosumption is refuted in this thesis and defined as value production activities carried out by an individual or a group of co-prosumers that result in the production of their own products and services rather than the use of final or customized products from the marketplace.

All the discussions above imply that prosumers rather than firms become proposers and receivers of their own goods and value in contrast to co-creative practices where consumers are essentially perceived as receivers of value propositions from firms. This definition of prosumption also aligns with Humphreys and Grayson's (2008) concluding conceptualisation of the term as peer-to-peer and collective production activity among individuals. While prosumers' focus is centred mainly on use value, it is asserted that this distinction is still important, reflects the original meaning of prosumption and acts as a useful distinction between prosumption and co-creation of value as practices in marketing terms.

While exchange and use value are still relevant in discussions of co-creation, the focus is on the creation of value with the firm (e.g., Fyrberg, 2013; Grönroos, 2012; Hilton et al., 2012). Developed from Vargo and Lusch's (2004) theory of S-D logic, and Prahalad and Ramaswamy's (2004) theory of value co-creation, the emphasis of co-creation is on the consumer's role in the creation of value in production. Critical to S-D logic is the idea that goods are used by consumers as provisions of services rather than being valued as end products per se. Customers are co-creators and participants with commercial suppliers, consuming goods as mechanisms for service provision. Co-creation, therefore, lies, in Humphrey and Grayson's (2008) terms, in the area of company-consumer partnership. Similarly, Prahalad and Ramaswamy (2004) view consumers as active producers of value, who co-create their unique experiences with commercial suppliers. This stream of research places the consumer clearly in the context of company-consumer production and this is seen

as a critical distinction between co-prosumption (peer-to-peer among individuals) and co-creation (company-to-consumer).

2.4 Distinguishing between Prosumer and Co-Creator Roles

The role of the consumer as a participant in the production of goods and services has been acknowledged in many works using concepts other than prosumption such as co-production (Vargo and Lusch, 2004), co-creation (Grönroos, 2012; Prahalad and Ramaswamy, 2004), craft consumption (Campbell, 2005), democratising innovation (Von Hippel, 2005), convergence culture (Jenkins, 2006), mass collaboration (Tapscott and Williams, 2006) and collective innovation (Kozinets et al., 2008). An understanding of the differences among such concepts is required in order to set out expectations, responsibilities and opportunities for firms and consumers in marketplaces, particularly in terms of the creation of value with and for the firm as opposed to that which is not. Today many researchers use the terms consumer co-creation and co-production interchangeably (Dong et al., 2007; Payne et al., 2007; Pini, 2009) and some equate these terms with prosumption (Comor, 2011; Ritzer and Jurgenson, 2010; Zwick et al., 2008). For the purpose of this research, the focus on distinguishing prosumption (and co-prosumption) from co-creation as introduced in the previous section.

But many researchers have focused on consumers as partners and co-creators with firms. Researchers pursuing this perspective often draw on studies by Bettencourt (1997), Bendapudi and Leone (2003), Vargo and Lusch (2004) and Prahalad and Ramaswamy (2004), whose works focus on the role of the consumer as a value co-creator within a firm-to-consumer relationship. This field of research is focused on the advantages of involving consumers as co-creators (i.e. operant resources) for firm benefits including competitiveness (Claycomb et al., 2001), better service quality (Dong et al., 2007; Lengnick-

Hall, 1996) and help with new product development (O'Hern and Rindfleisch, 2009; Pini, 2009; Sawhney et al., 2005). Attention has also been given to the managerial aspects of consumer co-creation with firms (Griseemann and Stokburger-Sauer, 2012; Huhn, 2004; Payne et al., 2007; Zhang and Chen, 2008). By reorienting consumers as co-creators, firms integrate consumers as competitive resources into their services and marketing systems (Prahalad and Ramaswamy, 2000).

The review above suggests that the marketing literature has largely focused on examining how firms plan and manage their joint activities in the process of co-creation with their consumers, while less attention has been dedicated to consumer-centred or collective practice of production among consumers. It also suggests that consumer co-creation is employed effectively by businesses through mobilising free resources for the benefit of firms. Humphreys and Grayson (2008) argue that consumption often involves handling jobs that were previously performed by the firm, but this does not necessarily change what it means to be a consumer or a producer (i.e., consumers create use value, which can be used only by the consumer). However, they add that a fundamental change occurs when consumers participate as co-creators of exchange value, which can be exploited by firms. This implies that a form of exploitation of consumers as sources of human and capital labour is likely in situations of value co-creation in marketing. This approach is in line with Scholz's (2012) critical ideas around what he acknowledges as the 'social factory', where value is increasingly produced outside the walls of the workplace and without a wage through peoples' social practices. While Humphreys and Grayson (2008) refer to material products in their discussion, the invisibility and immateriality of the digital labour which is carried out by social actors as they generate online social content (and thus value) can be viewed as the type of labour that firms exploit (Scholz, 2012).

Prosumers engage in value creation activities which may sometimes require the integration of professional products or services into prosumers' experiences (Xie et al., 2008). For example, while craft consumers follow their need for self-expression and employ knowledge, skills and passion to make and design their own products (Campbell, 2005), they also use materials acquired from the marketplace (Campbell, 2005). The role of the craft prosumer is, however, less likely to be exploited by firms. Similarly, in line with the understanding of prosumers they replace the role of professional companies when co-creating use value rather than work with firms to co-create exchange value. Prosumers as shown earlier often engage in creative acts such as crafting, car modifying and home remodelling. However, it is that prosumption represents a better type of valorisation of consumer labour built on use rather than exchange value. Therefore, distinguishing the role of the prosumer from roles such as consumer co-creator may help to resolve the growing debate that mistakenly situates the practice of prosumption as a synonym for consumer co-creation and, thus, problematic consumer exploitation (Comor, 2011; Cova et al., 2011; Ritzer and Jurgenson, 2010; Terranova, 2000; Zwick et al., 2008).

Wolf and McQuitty (2011) suggest that prosumption requires more involvement from consumers than co-creation or co-production. The authors argue that co-creation and co-production assume that consumers take partial responsibility for some tasks typically undertaken or proposed by the company, while prosumption assumes that consumers take full responsibility for the conception and production of their own products and services. To support this argument, others (Wolf and McQuitty, 2011; Holt, 1995) have demonstrated that consumers manipulate the use and meanings of objects in accordance with their needs rather than those intended by firms. Denegri-Knott (2006) and Marandi et al. (2010) also show how consumers work together and use online services in ways that are more

consistent with their own requirements rather than those proposed by service providers. What the discussion above highlights is that although engagement with commercial firms is critical in consumers' experiences of co-production and co-creation, prosumption does not necessarily require such engagement. Prosumers reconstruct the symbolic meanings of commercial products and services in their own way and for their own purposes. In this way, prosumers' focus is not on their relationship with the firm, but rather on addressing their own needs or their relationship with co-prosumers.

2.5 Collective Prosumption

There is evidence in the consumer and marketing literature which highlights the collective ethos of prosumption. For example, Gelber (1997) provides an historic account of do-it-yourself tasks, home repair and maintenance, and shows how these practices have been used to express men's masculinity in a suburban community. This suggests that prosumption through DIY consumption is not only associated with prosumers perception of their identities but rather it is also associated with how others in the community may perceive prosumers. Similarly, Bugge and Almås (2006) manifest meal preparation which is a form of prosumption by families in a suburban community as a cultural and social representation that is not merely a practice of positioning oneself but also a practice of caring for others in the community. Moisio et al. (2004), in line with Bugge and Almås (2006) illustrate that homemade food, in a Midwestern-based community, can be a practice of resistance against mass production in the market to maintain family identity across generations. All of these examples explain how individual prosumers connect with their communities through their practices, which in turn address prosumption as a practice which is also associated with collective benefits in society.

Others such as Deighton (1992) addresses consumption as a production act in the community beyond the focus on the family. Deighton (1992) refers to a group of people who participate in events (e.g., sporting contests, music concerts, college lectures...etc.) as consumers of performance who use products to perform for them. So, Deighton (1992) probably better than others offers one of the few exemplars which reflect the significance of collective prosumption in offline communities. However, prosumption has only recently received attention as a priority topic for academic research (Ritzer and Jurgenson, 2010). This might be linked to the increasing use and development of communication technologies mainly through the internet. There is a growing interest in the collective behaviour of consumers especially with the advent of technologies that enable peer-to-peer forms of participation (e.g., Benkler 2006; Jenkins 2006; Tapscott and Williams, 2006). Prosumption is profoundly driven by technological advancement (Beer and Burrows, 2007) but it is also easier to observe among many of today's consumers who participate through sharing their individual projects with other users of the internet. Therefore, the section that follows focuses on reviewing the role of the internet (Web 2.0) as a platform of prosumption as well as the impact of online communities as prosumption enablers.

2.5.1 The Internet (Web 2.0) as a Platform for Collective Prosumption

The internet is perceived as a technology which is always open to technical developments. While there is a variety of offline forms of prosumption as shown earlier, changes associated with the internet and the emergence of user-generated content through social media such as Facebook, YouTube, and Twitter (Beer and Burrows, 2010; Ritzer and Jurgenson, 2010) have reinvigorated the concept of prosumption. For example, prosumption is often associated with the technical capabilities which structure the internet (i.e. Web 2.0) in a certain way to enable participation among prosumers. The term Web 2.0 is suggested by

O'Reilly (2007) to refer to the second generation of internet technologies which are, in contrast to Web 0.1, more open, collaborative and participatory. A Web 2.0 site enables users to participate in a social dialogue as prosumers of user-generated content in online communities.

There are many examples of Web 2.0 that include major applications such as social networking sites, blogs, wikis, hosting services, video sharing, folksonomies and mashups. It is probably useful to offer a short overview on these mainstream sites of Web 2.0 and illustrate their impact on our understanding of collective prosumption. Social networking sites such as my Myspace and Facebook have been considered the leading examples of social and cultural engagement (Beer and Burrows, 2007). Users can join these sites to create their own profiles, state their interests and create personal content they wish to share with other peers such as their families, friends and co-workers. These sites are supported by sharing and networking tools to help users of the site. To this end, therefore, every user can be viewed as a producer of a digital-based content (e.g. list of friends, photos and comments). Another common example is the blog, defined by people contributing a text that can then be commented on, and more recently microblogging sites such as Twitter, which is used in a similar way to social networking sites but uses shorter texts with higher real time activity. This overview only provides a brief description with very few examples. It is very likely that many people are already familiar with these applications, and how they work.

Such collective prosumption can be also observed in a variety of other online communities which are managed by professional firms or consumers. Generally speaking, there are different structures of these communities from e-commerce to brands communities and subcultures of consumption. These communities are established for different purposes either by commercial firms, or consumers or sometimes the community is a complex

combination of consumers, private sellers, small and large firms. An e-commerce community is a common example of the communities which are managed by professional firms. An e-commerce is commonly understood as an electronic marketplace for buyers and sellers such as many of today's online shopping sites such as eBay, Amazon, Alibaba and other global electronic places of online shopping. Other common examples include communities which are focused upon a specific product or a commercial trademark and commonly referred to as brand communities (Muniz Jr and O'Guinn, 2001). These may include brand communities such as Jones Soda, Garmin, Stri-vectin, Lomo, and Holga which all are some of the few examples of commercial brands frequently cited by marketing researchers and could be managed either by firms or consumers.

Other examples include communities which are very often managed by groups of consumers. Social aggregations, which are implicitly or explicitly focused on consumer-related interests, are regarded as 'virtual communities of consumption' (Kozinets, 1997; Kozinets and Handelman, 1998) or online 'subcultures of consumption' (Schouten and McAlexander, 1995). This is the case of many social forums which provide discussions and posts about automobiles, computers, and other interests of online shoppers. Overall, all the above descriptions demonstrate the various structures of consumers groups on the internet and their significance to marketers. In this thesis, any groupings of consumers which emerge on the Internet either managed by firms or consumers are referred to as online communities. The section that follows will explore online communities as collective prosumption enablers.

2.5.2 Online Communities as Enablers of Co-Prosumption

Online communities are increasingly becoming sources of consumer power through consumer learning and collective wisdom (Dholakia et al., 2009; Kozinets et al., 2008; Mathwick et al., 2008), and can be defined as membership groups 'whose online interactions

are based upon shared enthusiasm for, and knowledge of, a specific consumption activity or related group of activities (Kozinets, 1999, p.254). Online communities as enablers of collective consumer action represent one of the most prominent fields of research to marketing and consumer researchers. Such online communities not only embody a discourse of power as a result of consumer-to-consumer participation but also as a source for innovation and creativity in society and the marketplace.

Prosumers in online communities are able to share resources and ideas in ways which are not possible in offline contexts; social forums or social networking sites aid their organisation from anywhere in the world, at any time, and enable participation through a 'collective mind'. Cova and Dalli (2009) also highlight these points when exploring streams of research on value creation from the perspective of tribal value. They highlight the role of online communities as guardians of value produced by members and suggest these communities develop entrepreneurial strategies to price, protect and distribute value produced by the community. According to this perspective, online communities employ prosumers as invisible workers through tools such as forums, peer-to-peer systems and other collective action. In return, prosumers are rewarded by sharing the results of their work through selecting the best ideas in the community and getting various symbolic, social and even material rewards. Similarly, Bagozzi and Dholakia (2002) also examine the social role of virtual communities in shaping and influencing members' preferences, and suggest that, through social action and collective participation, virtual communities influence an individual's social identity.

2.6 Summary

Prosumption was first used by Toffler (1981) to describe people who act as independent producers of their own goods and services rather than customers of commercial suppliers.

Other researchers such as Ritzer and Jurgenson (2010) have recently recaptured the significance of the practice of prosumption as a convergence of both consumption and production, mostly alongside commercial partners. However, the literature of prosumption corresponds with several works in consumer and marketing research which note the increasing productivity of consumers as producers of their goods and services either alone or through participation with other players in the marketplace. These works can be reviewed from two particular perspectives: the role of the consumer as producer, and the role of the consumer as an integrator of resources. The role of consumers as producers has been acknowledged in service-based industries where consumers' participation has been viewed central to service production and delivery to consumers. From this perspective, many researchers have focused on understanding the implication of relationships between marketers as providers of services and consumers as receivers of services.

Consistent with the above literature, a new understanding of marketing has emerged with the focus on services more than goods, and the focus on the relationships with consumers rather than focusing on them. In this sense, many researchers have referred to some of the foundational premises of the 'S-D' logic theory of marketing by Vargo and Lusch (2004) particularly resources integration and value co-creation. The theory has evolved and modified by many researchers, including Lusch and Vargo (2006) who assert that consumers can engage in resources' integration and play roles which are similar to firms.

Resources integration is consistent with prosumption where consumers become producers of their products alone or through participation in value production with other consumers in the marketplace. But prosumption is not the same as other co-creative practices and the differences revolve around consumers' ability to produce their own products and integrate resources for their own use, rather than the use of others. In prosumption, consumption and

production are combined in the same practice (Kotler, 1986), while in consumer co-creation, consumers take partial responsibility as producers but this does not necessarily change their roles as consumers (Humphreys and Grayson, 2008). Consequently, prosumption is defined as value production activities carried out by the consumer(s) that result in the production of their own products and services rather than the use of final or customized propositions from the marketplace.

This chapter also has endeavoured to highlight the differences between the prosumer and co-creator roles. This chapter has focused on developing a better understanding of prosumption and the emerging role of the prosumer. It was argued that the role of the prosumer, unlike the role of the co-creator consumer, is less likely to be exploited by firms. Prosumers often become the producers of some of their products and services either alone or through participation with other prosumers. By doing so, those prosumers replace the role of professional companies and produce use value for their own consumption rather than becoming co-creators with firms which often produce exchange value for firms (e.g. free human labour). Finally, the chapter was concluded by reviewing the role of the internet (Web 2.0) as a platform of collective prosumption as well as the enabling role that online prosumer communities can have in shaping collective prosumption.

CHAPTER THREE: CONTEXTUALISING CONSUMER EMPOWERMENT

3.1 Introduction

Consistent with the literature review on prosumption in chapter two, the role of the prosumer is increasingly imbued with a potentiality for consumer empowerment (Cova and Dallı, 2009; Jarrett, 2003; Ravid et al., 2008; Wolf et al., 2015; Wolf and McQuitty, 2011). For example, Wolf and McQuitty (2011) refer to the empowering potential of prosumption at an individual level. However, their work is not focused on consumer empowerment through the marketplace or the empowering potential of prosumption at a collective level. Little is known about how individual prosumers empower themselves in the marketplace and how those prosumers experience empowerment through their participation in collective prosumption.

Additionally, consumer empowerment is understood differently by researchers in marketing and consumer research (e.g. Davies and Elliott., 2006; Denegri-Knott et al., 2006; Shankar et al., 2006). In this thesis, it would be rather difficult to interrogate the empowering potential of prosumption without discussing what is understood by consumer empowerment. There are myriad works on empowerment and power in social sciences which contribute to the complicated and contested meanings of consumer empowerment in marketing. This research suggests that as consumer empowerment is a broad concept and it needs to be understood within a specific context.

This chapter is divided into three main sections. The first section looks into the relationship between empowerment and power in social sciences. It aims to inform our understanding of consumer empowerment in marketing. Then, the second section discusses the alternative discourses of consumer empowerment found in the marketing and consumer research literature. Finally, the third section adopts one of these discourses of consumer

empowerment as a theoretical framework in this thesis, which suits the context of the debate in which prosumption is distinguished from consumer co-creation.

3.2 Empowerment and Power

There are abundant works on empowerment within many academic disciplines from politics (e.g. Banducci et al., 2004; Bobo and Gilliam, 1990; Peterson et al., 2002; Tangri and Southall, 2008) to psychology (e.g. Gibbs and Fuery, 1994; Rubenstein and Lawler, 1990), to management (e.g. Greasley et al., 2008; Thomas and Velthouse, 1990) and other social sciences. This widespread use of the concept across many social sciences highlights that empowerment can be used and understood differently across disciplines. Early scholarly works on empowerment in social sciences suggest that the concept is relatively new. Nonetheless the diversity of empowerment-related topics which are researched within social sciences makes it difficult to offer a universal definition of empowerment. This section looks into empowerment within the relationship between empowerment and power.

The relationship between empowerment and power has been the focus of many works across social sciences (Batliwala, 2007; Boje and Rosile, 2001; Cunningham et al., 1996; Tew, 2006). Power is the root word in English for empowerment (Lincoln et al., 2002): “to empower means to give power to” (Thomas and Velthouse, 1990, p. 667). The verb empower has two meanings according to the Oxford English Dictionary: “to bestow power upon, make powerful” and “to gain or assume power over” (Lincoln et al., 2002, p.272). Empowerment in this sense as defined by the Oxford English dictionary is consistent with some works in the literature of social sciences. For example, Cunningham et al. (1996) view empowerment as an act of empowering people through the redistribution of decision-making power. Nevertheless, it is important to distinguish power from empowerment as the latter has been excessively equated to power. Though power is an essential element of any

explanation of empowerment (Denegri-Knott et al., 2006; Starkey, 2003), Lincoln et al. (2002) remind us that empowerment does not equate with power but it is only an act that uses the latter to achieve a required outcome. On this basis, it is useful to understand empowerment through its relationship with power.

Foucault (1978), a key theorist on power, helps researchers to understand the manifold views of power in society. He associates power with the nature of relationships between people and institutions. Therefore, he rejects the notion of power as a commodity which is obtained by individuals or groups of people. Rather, Foucault (1978) mainly highlights the negative influence of power and associates it with people's dominance of each other in society. Nonetheless especially in his later works also highlights the positive influence of power. For example, Foucault (1977, p.194) in his work entitled 'Discipline and Punish' recognises power as a productive force in society:

"We must cease once and for all to describe the effects of power in negative terms: it 'excludes', it 'represses', it 'censors', it 'abstracts', it 'masks', it 'conceals'. In fact, power produces; it produces reality; it produces domains of objects and rituals of truth".

Foucault (1977) sarcastically criticises the use of power but he reminds us not to limit power to its negative influence in society. It appears that people tend to associate power as a negative influence perhaps in consistency with our observation of political power in our society. Rather, Foucault (1977) asserts that power has a positive side which is deeply rooted in our production of knowledge and reality. Similar to Foucault (1978), Hollander and Offermann (1990, p.179) distinguish three types of power relations: "power over" (power as dominance over other people), "power to" (power as sharing with other people) and "power

from” (power as resistance of others). So, Hollander and Offermann (1990) also help us to note power through its positive and negative influences within our social relationships.

Tew (2006, p.41) also acknowledges power as a social relation and offers a matrix to understand power as both damaging and productive in people’s social relationships. He describes two forms of the negative influence of power (oppressive and collusive power) and two forms of the positive influence of power (protective and co-operative power). Tew (2006) associates oppressive and collusive forms of power with the exploitation and exclusion of other people in our relationships respectively, while he associates protective and co-operative power with the protection of vulnerable people and making collective action in the community.

So far the above discussion shows that power has been associated with manifold negative and positive influences within people’s social relationships in society. Yet, some researchers also appear to associate empowerment with negative consequences on the part of consumers. It appears that there are some common association between the negative influence of power as a form of political control. It is common that many people, researchers, might think of empowerment as damaging. However, many researchers have associated empowerment with a positive rather than a negative influence of power. Empowerment in social sciences is commonly understood as a productive rather than a damaging view of power as a development of negotiation skills (Hainard and Verschuur, 2001), an expansion in making strategic choices (Santillan et al., 2004), an achievement (Bobo and Gilliam, 1990), an increase of motivation (Thomas and Velthouse, 1990), a gaining of self-mastery (Rappaport, 1987), an improvement of life (Zimmerman, 1995) and a sharing ability (Cattaneo and Chapman, 2010). This means that empowerment mostly refers to how people expand their skills or abilities across their different life projects. On this basis, empowerment

reflects the positive and productive rather than the negative and dominating influence of power among people in society. To put it in the words stated by Tew (2006, p.49), “empowerment offers a more positive vision of the productive possibilities of power”.

In line with Tew (2006), Haugaard (2012) draws on Foucault (1978) and Lukes (2005) in their conceptualisation of the contrasting views of power and argues that empowerment is more consistent with a positive view of power. Lukes (2005) advances our understanding of the productive perspective of power. He suggests that people have multiple interests which may not be necessarily contradictory to each other. The author shows that people can use power as a productive influence through the mutual satisfaction of their interests rather than seeking dominance over each other's.

Overall, the above discussion emphasises the conceptual link between empowerment and power. But it also illustrates that empowerment in social sciences can reflect a positive rather than just a negative view of power. This offers better insights into conceptualisations of empowerment in marketing. Empowerment, rather than disempowerment, is more consistent with a positive influence of power among consumers themselves or between consumers and producers in the marketplace. This thesis mainly focuses on empowerment from the consumer rather than the producer perspective. Therefore, the next section will explore diverse discourses of consumer empowerment in marketing and examines the extent to which these discourses have been associated with a positive or a negative view of consumer power.

3.3 Discourses of Consumer Empowerment

Empowerment in the marketing and consumer research literature essentially refers to empowering consumers rather than producers (i.e. marketers, firms), buyers rather than

sellers, users rather than services providers. Researchers frequently use the word empowerment to refer to consumer empowerment (e.g. Harrison et al., 2006; Newholm et al., 2006). Some researchers such as Fischer et al. (1996) and Dobscha (1998) have used words such as 'empower' and 'empowering' in some of their early discussions in the context of consumer research. Others such as Wathieu et al. (2002) literally used the term 'consumer empowerment' to propose it as an interesting concept for research in marketing.

Such references to consumer empowerment in scholarly works raise basic questions such as whether consumers in the first place are seeking to be empowered, and whether marketing agents in the second place are genuinely interested in empowering consumers (i.e. traditional adversaries). It appears rather difficult to understand the nature of these questions without essential references to two main arguments. The first argument is concerned with the conceptual relationship between power and consumer empowerment. It appears inevitable to discuss such relationship in marketing in a way that is consistent with discussions, in the previous section, of power-empowerment relationship in social sciences.

The second argument is concerned with the essence of consumer empowerment in marketing and consumer research. As a matter of reference, there are various references to 'consumer empowerment' in scholarly works in marketing and consumer research as a marketing concept (Wathieu et al., 2002), a marketing strategy (Pires et al., 2006; Hunter and Garnefeld, 2008), a marketing tool (Chowdhary, 2003), an educational tool for consumers (McGregor, 2005) and a discourse for consumer management (Zwick et al., 2008).

Similar to the empowerment-power relationship in social sciences, the discipline of marketing is no exception as many researchers argue that associating consumer

empowerment to a theory of power is essential to accept any claims of consumer empowerment (Denegri-Knott et al., 2006; Harrison et al., 2006). A distinct scholarly example from the literature of marketing is Denegri-Knott et al. (2006, p.951) who highlight such conceptual relationship between power and consumer empowerment:

“This state of affairs is problematic for any research agenda seeking to understand consumer empowerment, because observations linked to whether or not consumers are empowered are irrevocably wedded to the starting definition of power supporting such claims.”

The above quotation from Denegri-Knott et al. (2006) therefore help us to understand that any discussion of consumer empowerment would be rather vague without contextualising empowerment in relation to a theory of power. But most importantly the above quotation also brings us back to the basic questions in relation to consumers’ willingness to be empowered and marketing agents’ willingness to empower their consumers. Arguably, consumers’ willingness to be empowered might correspond to an assumption of empowerment as an effect of corporate power as a practice by which marketers act on or perform to consumers. Hence, this in turn means that empowerment is not an outcome that are pursued on by consumers, rather it is the effect of consumers’ relationships with marketers (or producers). This is in line with some works such as Fuchs et al. (2010) and Fuchs and Schreier (2011) who suggest that companies are empowering customers by letting them to choose products for their consumption. This understanding of consumer empowerment as an act by marketers to empower consumers is also evident in many observations in many mainstream markets. A recent example from the banking industry might help us to illustrate such view of consumer empowerment as an outcome which is driven by companies rather than consumers. For example, most banks in the UK in recent

years has introduced a new service to customers which enable them to make a contactless payment without the need to enter a pin number. This new service in the banking industry can then be viewed as empowering clients through an efficient payment system. But it would be argued then to what extent are consumers willing to be empowered through an efficient payment system. Such consumer empowerment would be also empowering to banks as their payment system become more efficient towards their business clients.

Consumer empowerment in marketing is often debated in relation to the power struggle between consumers and producers (i.e. buyers and sellers, customers and marketers). On this basis, some researchers such as Zwick et al. (2008) and Bonsu and Darmody (2008) emphasise the nature of relationship between consumers and producers as adversaries which then suggest that firms are not authentically interested to empower consumers. Other researchers in marketing make claims on the rise of consumer power (Pitt et al., 2002; Moynagh and Worsley, 2002; Nelson, 2002) and some of them even add that such shift of power is mostly an empowerment on the part of the consumers (Shankar et al., 2006). But a fundamental question in this context is whether consumers principally note a rise of power and experience a form of consumer empowerment or these claims of power rise on the side of consumers are just the interpretations imposed by researchers such as the case of 'Nutella The Community' by Cova and Pace (2006) by which consumers' socialisation around a chocolate brand is said to empowered to those consumers rather than using them to promote the brand.

Zwick et al. (2008) argues that consumer empowerment is just a new governing discourse advocated by marketing agents to discipline rather than empower consumers through 'putting them to work'. Huhn (2004) borrow form a liberal view of empowerment and invite firms to 'liberate' consumers and 'reap the benefits'. In this sense, Huhn (2004) seems to

support a discourse of corporate power by which benefits be more to the side of producers than to the side of consumers. The above questions might not help us to resolve the controversy around consumer empowerment that is evident in many scholarly works with an essential question about whether consumers are genuinely empowered or exploited by firms. Consumer empowerment might remain a topic for debate since it is not easy to make a universal judgment that is applicable to all consumers and spaces in the marketplace. Nonetheless, the above questions help us to understand consumer empowerment as a discourse in the market more than a concept, a tool or a mentality that is simply advocated by powerful agents over other disempowered agents in the domains of consumption and markets.

Denegri-Knott et al. (2006) propose a map of consumer power in marketing in order to offer direction for research on consumer empowerment. But their conceptualisation of consumer power is influenced by many influential theories of power from social sciences. Therefore, this section mainly uses Denegri-Knott et al.'s (2006) map of power as a point of departure to understand and evaluate the diverse discourses of consumer empowerment in marketing. Denegri-Knott et al.'s (2006) work is integrated with other conceptual research in the literature of power (Tew, 2006) alongside the broader empowerment literature in marketing and consumer research. This results in three discourses of consumer empowerment that has been informed by three distinctive theories of consumer power: empowerment as consumer freedom through sovereignty power, empowerment as consumer resistance through cultural power, and empowerment as consumer productivity through discursive power. Each of these discourses of empowerment through an-informed theory of consumer power is discussed below and the third discourse of consumer empowerment is found more consistent with a balanced context of empowerment in light of prosumption.

3.3.1 Sovereignty Power and Consumer Empowerment through Freedom

Consumer freedom as a discourse of empowerment is informed by a theory of consumer sovereignty which is suggested by Denegri-Knott et al. (2006) in their map of consumer power. Consumer sovereignty is one of the basic assumptions in marketing. In the view of Lerner (1972), it refers to a very simple idea of individual freedom by letting everybody in society decide for themselves rather than having someone else decide for them. Hutt (1936) views consumers as the most influential players who decide the nature of goods and services to be produced in the marketplace through their freedom. On this basis, consumers' ability to make free choices in the marketplace is perceived as central to consumer empowerment (Harrison et al., 2006). Jenner (1994, p.15) refers to this discourse of consumer empowerment and associates it with consumers exerting free choices in the marketplace:

“The growth in the variety of affordable substitutes, including product styles, colours, sizes... means that consumers do not have to accept or “take” a product that has features or qualities they do not like.”

Jenner (1994) associates the increase of choices in the marketplace with an increase of consumer freedom. So, consumers feel empowered through their freedom to select from a wide range of products and services available to them in the marketplace. Another manifestation of consumer empowerment is evident in consumers' freedom to select the components of products or services. For example, Mattila and Cranage (2005) suggest that giving customers' some control over some components of their services increases customers' feelings of responsibility and sense of empowerment over their choices. A good example is Niininen et al. (2007) who show that tourism service companies such as Booking.com and Lastminute.com empower customers through enabling them to customise

their travel packages or rooms reservations (e.g. non-smoking room, breakfast inclusion, customised welcome message).

Similar to Niininen et al. (2007), Fuchs et al. (2010) suggest that companies empower customers through enabling them to participate in the selection of new products. Fuchs et al. (2010) explore some of the psychological consequences for consumers who participate in the task of products' selection. In other words, Fuchs et al. (2010) attempt to understand the relationship between enabling consumers to select the products to be marketed to them by firms and the individual demand for the products selected by those consumers. In this sense, Fuchs et al. (2010, p.67) assume that empowered customers are those "who participate in the new product selection process" and disempowered customers are those "who do not participate in the new product selection process". Consequently, Fuchs et al. (2010) suggest that consumers who are "empowered-to-participate in the products' selection process show a stronger demand for the products, not as a result of a change in the products' quality, but as a result of consumers' psychological experience as participants of the products' selection. On this basis, Fuchs et al. (2010, p.66) define empowerment as "a strategy firms use to give customers a sense of control over its product selection process, allowing them to collectively select the final products the company will later sell to the broader market". This definition by Fuchs et al. (2010) may help us to understand empowerment through consumer freedom. This means that consumer empowerment not only refer to consumers exerting free choices in the marketplace as proposed by some researchers (e.g. Harrison et al., 2006; Jenner, 1994) but it may also refer to how companies delegate decisions (e.g. products design, marketing) to consumers. In this sense, consumers are presumably empowered by firms through exerting freedom over selection elements which are often managed by firms.

Such consumer freedom is not only manifested in the wide selection of products and services available to consumers or the possibility to choose the components of their market offerings. Consumers can also choose brands which better satisfy their interests. Nelson (2002), for example, shows that trusted brands can help consumers when they are dealing with complexity of choices. However, the increase of choices including consumer ability to select, accept and reject market offerings often reflects a manifestation of consumer freedom. Other researchers also associate the development of information and communication technologies with consumer empowerment (Pitt et al., 2002; Niininen et al., 2007). On this basis, some researchers rather suggest that consumers have only recently experienced empowerment through the freedom enabled by the introduction of the internet. The internet is viewed as the cornerstone technology of consumer freedom (Rha et al., 2002) which enables customers to access information and learn about suppliers, market offerings and prices (Tat Keh and Park, 1998).

Kucuk and Krishnamurthy (2007) describe four sources of consumer power on the internet which have enhanced consumer freedom in their relationships with firms in favour of the consumer: technologic (superior mobility and convenience), economic (access to markets), social (access to family, friends, communities and professionals) and legal (access to government, public and private services). Others such as Bakos (1997) and Rha et al. (2002) examine the role of the internet as a tool to reduce the search information costs for consumers through all the stages of consumption from pre-purchase, to purchase and post-purchase. Such works may show the potential of the internet as a tool to empower individual consumers by providing them with cheaper prices for products especially in online marketplaces. Some researchers also acknowledge the potential of the internet as a tool

which enables consumer freedom as groups who can enhance their negotiations with producers (Bakos, 1997; Varadarajan and Yadav, 2002; Porter, 2001).

Generally, this discourse of empowerment through consumer freedom can manifest in a diversity of ways which are not restricted to consumer choices or access to information. Consumer empowerment, in line with this discourse, refers to how individuals or groups of consumers gain control from producers within the marketplace which is evident in many consumer and marketing studies (Pires et al., 2006; Moynagh and Worsley, 2002; Pitt et al., 2002; Harrison et al., 2006). Denegri-Knott et al. (2006, p.963) propose that “the consumer is empowered when he or she is free to act as a rational and self-interested agent”. But Denegri-Knott et al. (2006) also add that consumers can combine their efforts and resources so their interests shall prevail over producers.

The discourse of empowerment through consumer freedom can be examined within a quantitative understanding of power as suggested by Denegri-Knott (2006), which means that an increase of consumer power is equivalent to a decrease of producer power. This implies that consumer empowerment can be rather understood as producer disempowerment in a specific market setting.

Empowerment through consumer freedom can be aligned with a positive effect of power as consumers are seen to act to protect their self-interests in the marketplace either alone or with other consumers (e.g. consumer rights, boycotting, lobbying). This is consistent with Tew (2006) who refers to protective power (power over) as a productive effect in which power is deployed to safeguard vulnerable people. In this sense, consumers can be viewed as vulnerable to unfair trading issues imposed by producers (e.g. overpricing, fraud) and tend to protect their vulnerability.

Despite the above discussion, consumer freedom as a discourse of empowerment is critically questioned. Marketing is viewed as a hegemonic practice (Fitchett and McDonagh, 2001) and consumers are only liberated to exercise their freedom in line with the domination of marketing. Although consumers may choose to believe they are genuinely empowered, they are only allowed to abide by the rules imposed by marketing institutions (Bekin et al., 2006). A good example is Huhn (2004, p.225) who puts “liberate your customers and reap the benefits.” Consumer ability to access more choices in the marketplace (Shankar et al., 2006) is viewed as consistent with the interests of producers (i.e. marketers) more than consumers. Increased consumer choice is often questioned in terms of its empowering potential (e.g. Shankar et al., 2006; Wathieu et al., 2002). Shankar et al. (2006) suggest that choice is a disciplinary power and that more choices may lead to choice paralysis rather than consumer empowerment. Likewise, Wathieu et al. (2002) acknowledge that consumers’ ability to make their choices influences their experiences of empowerment, but they argue that consumers may not always seek more choices or feel satisfied with the outcome of their choices.

Similar to Shankar et al. (2006) and Wathieu et al. (2002), Davies and Elliott (2006) question the increase of choices in the UK and its implications for the experiences of consumers. They examine the evolution of the empowered consumer and brand consciousness in the UK and report on the initial, confusing consequences of the brand increases in the UK. Based on their findings, they argue that consumer empowerment is a paradoxical process which should not be simply associated to the increase of consumer choice in the marketplace.

Access to the internet is also questioned as a manifestation in favour of consumer freedom. For example, Harrison et al. (2006) evaluate the extent to which the internet, in the context

of online pension information provision, has empowered consumers. They propose that consumers generally feel empowered by the internet through enabling them to access information with the potential to increase their knowledge and understanding. However, Harrison et al. (2006) suggest that consumer empowerment is not fully realised in the context of online pension provision due to the information gap between consumers who need information and the pension providers who supply them. Therefore, this example illustrates how suppliers in the context of pension provision empower and discipline their customers through exerting control over access to information. Furthermore, this example may also demonstrate that consumers' perceptions of empowerment can be subjective and vary across different sectors of the marketplace.

3.3.2 Cultural Power and Consumer Empowerment through Resistance

Consumer resistance can be understood as an alternative discourse of empowerment which is informed by a cultural perception of power as proposed by Denegri-Knott et al. (2006). Researchers within this discourse of empowerment follow De Certeau (1984) who highlights the resisting power of consumers as creative players who act against the manipulation and hegemony of marketing institutions (Denegri-Knott et al., 2006; Bekin et al., 2006). On this basis, cultural perception of power is associated with the activities of resistance by consumers to free themselves from the consumer culture ideology or marketers' imposed meanings rather than the struggle for the improvement of conditions in the marketplace.

Fiske (1994) suggests that consumers tend to resist the power of the marketplace and view the sphere of consumption as a place for struggle and social change. Denegri-Knott (2004) reports on consumers' resistance to firms' restrictions in the context of an online marketplace. She examines power relations between firms and consumers of online music and suggests that consumers resist the power of firms through the engagement of creative

actions which lead to consumer autonomy. Kozinets and Handelman (2004) explore a number of anti-consumption movements and their resistance to consumer culture. All of the above authors refer to examples of empowering movements of individuals and groups of consumers who reject the dominant mainstream consumer culture supported by marketing institutions.

Empowerment through consumer resistance is specifically evident and consistent with ethical consumption, which is defined by Crane and Matten (2007, p.341) as “the conscious and deliberate choice to make certain consumption choices due to personal moral beliefs and values”. For example, Dobscha (1998) introduces a case of a group of individuals who have a critical stance against the practices in the marketplace, especially those which are considered degrading to the environment. According to Dobscha (1998), those individuals reject being labelled as consumers and reject the meanings imposed by marketing instead they choose to resist the market as a place for domination. This position of resistance against marketing is perceived as empowering to individuals who do not wish to be framed as consumers, and choose instead to create new identities that are more consistent with their environmental concerns (Bekin et al., 2006). Similarly, at the community level, Bekin et al. (2006, p.32) describe behaviours of consumers in “new consumption communities” as empowering through helping them to achieve their environmental goals. Consumers who are portrayed as members of these communities choose to develop alternative methods of waste minimization contradictory to those normally exercised by dominant manners of consumption. Shaw et al. (2006) report on a group of consumers who express their concerns with corporate practices and find that ethical consumption is practiced by those consumers and viewed as a political voting metaphor for consumer empowerment within collective behaviour.

Consumers may not always resist consumer culture ideology; they may instead want to practise their freedom and create their own meanings about brands rather than accept those imposed by marketers. Denegri-Knott et al. (2006, p. 959) argue that consumers may not always be able to reject the products of the market, but they can challenge the ideologies and meanings imposed by marketers:

“Consumers increasingly perceive the market as antagonistic networks of power designed to control and manipulate them...consumer power resides less in the ability of consumers to reject the products of the market, but rather “in the art of using those imposed ...consumer empowerment is manifested in the creative adaptations and manipulations of the marketer-intended meanings and uses of products and advertisings.”

Cova and Pace (2006) present an example which is consistent with the above argument by Denegri-Knott et al. (2006). They introduce the case of a convenience online brand community as an example of consumer empowerment, which is based on consumers' self-expression rather than the intervention of the brand's managers. Cova and Pace (2006) refer to hijack of brands by consumers (Wipperfurth, 2005) and suggest that consumers in the community resist managers 'control over brands' ideology, use and persona.

Empowerment through consumer resistance can be aligned with a positive effect of power as consumers can act to protect their personal and/or moral values either alone or with other consumers. On this basis, empowerment either through consumer freedom or consumer resistance are both discourses which are consistent with protective power (i.e. power over) as proposed by Tew (2006). Power manifests as the protection of rational and personal interests of (e.g. rights in the market) in line with empowerment through consumer sovereignty (as suggested in the previous section) or the protection of moral and personal

values (e.g. self-expression, self-sufficiency) in line with empowerment through consumer resistance. Moraes et al. (2010) present an example of empowerment which illustrates how consumers act to protect their personal and moral values through consumer resistance. Moraes et al. (2010) address anti-consumption activities by a group of consumers who choose to produce some of their own food in line with their values of as self-sufficiency rather than negatively acting against consumer culture.

Consumer resistance as a discourse of empowerment is questioned by some researchers (e.g. Holt, 2002; Kozinets, 2002). Consumers within this discourse of empowerment are overly viewed as manipulated and seduced by consumption and oppressed by marketing hegemony (Fitchett and McDonagh, 2001; Murray and Ozanne, 1991; Ozanne and Murray, 1995; Rosenthal et al., 2001). Kozinets (2002) explores the emancipatory dynamics of the burning man project, a community which is dedicated to anti-consumerism, and illustrates in his ethnographic reading of the event that consumers cannot entirely evade the ideology of the market. Rather, he argues that consumers can only resist marketers' control over commercial spaces.

Holt (2002) also challenges existing theory of consumer resistance. He argues that consumers never threatened the marketplace itself; consumer resistance only threatens some entrepreneurial firms with old branding principles and creates opportunities for corporations that respond to the emerging new branding principles. This approach is followed by Thompson (2004) who suggests that natural health consumers adopt an alternative way of medicating which resists discourses of producer power while supporting another discourse that sustains the natural health marketplace. Kozinets and Handelman (2004) conclude their study of ludic agency and retail spectacle by pointing out the far overlapping and interdependent interests of consumers and producers. Overall, such

discourse of empowerment through consumer resistance is challenged by its potential opportunity for producers. In this sense, resisting consumers continue to question undesirable firm practices (Bekin et al., 2006) but simultaneously create opportunities for producers who respond to their demands.

3.3.3 Discursive Power and Consumer Empowerment through Productivity

Consumer productivity as a discourse of empowerment is informed by a discursive model of power that operates between and among free agents in the market (i.e. interplay between consumers and producers) (Denegri-Knott et al., 2006). This discourse of empowerment also represents a cornerstone in other works by authors such as Cova and Dallı (2009) in their concept of working consumers and others (Prahalad and Ramaswamy, 2004; Vargo and Lusch, 2004; Holt, 2002; Denegri-Knott et al., 2006; Zwick et al., 2008) who recognise consumers as productive players and co-creators or co-producers through their relationships and practices with other agents (i.e. consumers or/and firms) in the marketplace. Empowerment within these discussions of consumer productivity is underpinned by an alternative understanding of power as multidimensional rather than an effect (or power over) the other (Lukes, 2005). Most noteworthy, such discourse of empowerment is more consistent with a Foucauldian interpretation of power as a force that produces and reproduces knowledge in social spaces through discursive practices as noted in the works by Foucault (1977; 1988). In this sense, the market can be considered as a social field of interaction for multiple players (consumers, producers, firms, ...etc.) who co-produce the market through their discursive practices. But this begs a deeper review into some of the works by Foucault (1977) in particular those works in the nature of relationship between power and knowledge as well as the nature of discursive practices in society.

Denegri-Knott et al. (2006, p.960) argue that such discursive model of power enables us to understand the productive effect of power in the market among and between agents as less aggressive in comparison to other consumer sovereignty and cultural models of power. According to Denegri-Knott et al. (2006, p.965), the acknowledgement of consumers' role as co-producers who influence the market through their interactions with firms may help researchers to offer an inclusive understanding of consumer power which consequently informs consumer empowerment:

“We suggest that a more inclusive, boundary-spanning and multi-dimensional view of power may generate a view of consumer empowerment as complementary to marketer power, rather than as antagonistic forces as is often the case.”

The above suggestion by Denegri-Knott et al. (2006), combined with the concept of working consumers (Cova and Dalli, 2009), supports a reconciled discourse of consumer empowerment through consumer productivity (as underpinned by a theory of discursive power) rather than through consumer freedom (as underpinned on a theory of consumer sovereignty power) or consumer resistance (as underpinned by a theory of cultural power). Overall, prosumption is neither completely consistent with a discourse of consumer empowerment through freedom nor completely consistent with a discourse of consumer empowerment through resistance. Rather, prosumption is more aligned with consumer productivity since prosumers become producers of their products and services and participate collectively as sharers and co-prosumers. This means that the third discourse of consumer empowerment is more relevant to the focus of prosumption as a productive practice which is relevant to individual and collective groups of consumers.

3.4 Discursive Power of Consumers: Knowledge, Discourse and Discursive Practices

This section steps further to offer in-depth reviews in the literature of discursive power. within three essential sub-topics: consumer power and knowledge, consumer power/knowledge and discourse and consumer power and discursive practices. The reviews on these sub-topics respectively is essential to understand the foundation for a discursive model of consumer power that underpin the adopted discourse of empowerment in this thesis (i.e. consumer empowerment through productivity). Hence, this section will focus mainly on works by Foucault (1977, 1978, 1988) and other related works (e.g. Weedon, 1987; Hook, 2007; Rouse, 2005). First, a discussion of the relationship between power and knowledge from a Foucauldian perspective will help us to understand how power affects individuals' behaviour and create different consumer subjectivities in the marketplace. Second, a discussion of the relationship between power/knowledge and discourse from a Foucauldian perspective will help us to understand the meaning of a discourse and how power produces different discourses, languages and structures that are operating among its social actors (i.e. consumers, producers or marketers) in the marketplace. Finally, an understanding of meaning of discourse as the product of power/knowledge will enable us to understand discursive practices of consumers.

3.4.1 Consumer Power and Knowledge

Foucault (1977) is well-known for the working of power as a producer of knowledge in society. According to Foucault (1977), power not only produces knowledge but power also serves and applies knowledge in a wide range of spaces from self-discipline to relationships with other individuals and public institutions in society. In this way, a Foucauldian understanding of power-knowledge relationship enable us to understand and justify how

power constitutes our behaviour, our relationships with others and the rules that are taking place in different social settings from prisons to churches to schools and hospitals. For Foucault (1977), any social setting is a 'field of experience/ action' which is controlled, produced, reproduced and modified by a 'power game' through knowledge available to us which in turn constitutes what should be perceived as 'normal' or 'abnormal' in that setting, or what justifies why order of things in a situation should dictate as A rather than B or C as possible alternatives.

Some examples from the works of Foucault (1977) might explain to some of us why it is just acceptable to keep people categorised as inmates under observation in public institutions such as prisons or hospitals. Foucault (1977), therefore in these examples, help us to understand how we perceive power as helpful to maintain or reward normal behaviour and prevent or punish abnormal behaviour in our pursuit of an efficient society. Such exercise of power by which public organisations discipline abnormal behaviour is not only about how we accept the effect of power on others. Rather, power as conceptualised by Foucault (1977) also maintain self-discipline since we need to understand how we view a certain behaviour as normal or abnormal (i.e. defiant) in our society. In this sense, a criminal would be self-disciplined in terms of submission to consequences or punishment towards his or her criminality.

The inseparable power-knowledge produce effect in markets and spaces of consumption in the same way it affects behaviour and spaces of social relationships. Building on the works by Foucault (1977) it would be possible to understand consumer power in terms of knowledge available to consumers in many aspects from their relationships with producers (i.e. marketers) to products and 'order of things' in the marketplace. It would be also possible to understand that normal and abnormal consumer behaviour may not only defined

according to how knowledge is created or advocated by producers (e.g. rules and terms). But consumers (as social actors) can also influence how knowledge informs perception of normal or abnormal behaviour in spaces of consumption.

Traditionally, consumer power has been linked to consumers' knowledge through the selection of products they purchase for their consumption. Apparently, many published academic works over the past decades have focused on consumers' knowledge in terms of how consumers evaluate products and services available to them in the marketplace (e.g. Alba and Marmorstein, 1987; Andaleeb and Basu, 1995; Park et al., 1994; Rao and Monroe, 1988). Researchers often examine consumer knowledge through comparisons of consumers' experiences and familiarity with products (Cordell, 1997), consumers' individual perspectives (Ratchford, 2001) and evaluation of consumer alternatives (Capraro et al., 2003). Cordell, (1997), for instance, measures consumer knowledge in terms of product evaluation through a comparison of consumers' familiarity (i.e. subjective expertise) to their objective expertise of products in the marketplace. Objective expertise is found to be a better predictor than familiarity and subjective expertise in terms of product evaluation in the marketplace. Likewise, Schaefer (1997) evaluates consumer knowledge through comparisons of various dimensions that impact on consumers' use of the country of origin in the evaluations of alcoholic beverages. However, Schaefer (1997), in contrast to the findings by Cordell (1997), suggests that neither brand familiarity nor objective or subjective product knowledge have effect on consumers' use of the country of origin cue in product evaluations in the context of alcoholic beverages.

Ratchford (2001) evaluates consumers' knowledge through comparison of what he referred to as the 'economic perspective' of products with other search perspectives (i.e. life cycle consumption patterns, lifestyles, brand loyalty, choice of features, and search behaviour).

Results by Ratchford (2001) shows that consumers learn by doing and focus their consumption and search for products in ways that increase the impact of their accumulated expertise. Capraro et al. (2003) evaluate consumers' knowledge through comparisons of alternatives available to customers in the context health insurance services. Results by Capraro et al. (2003) suggest that the level of objective and subjective knowledge of consumers has a direct effect on the evaluations of alternatives in the health insurance beyond consumers' satisfaction.

Overall, findings from comparisons of consumer knowledge in the context of products evaluations illustrates that a consumer never is disciplined by knowledge created, distributed and advocated by producers. Consumers use information provided by producers to individualise products in line with their expectations and consumption experiences. Thus, consumers are able to modify fields of consumption through subjective and objective expertise of knowledge about products in much the same way producers constitute the spaces of consumption and consumer behaviour in those spaces.

Researchers refer to different consumer subjectivities which results from the variation of knowledge available to consumers. For example, Clarkson et al. (2013) notes that consumers seek different types of consumption experiences which is determined by level of experiential knowledge within a product category. Clarkson et al. (2013) propose two groups of consumers who seek different consumption experiences in a product category: 'novices' who diversify their consumption experiences to broaden their consumer knowledge and 'experts' who focus their consumption experiences to deepen consumer knowledge. The classification by Clarkson et al. (2013) could be viewed as a simplified perspective on the subjective and objective variations in terms of consumers' knowledge, but such classification might help marketing practitioners to define different groups of consumers based on how

knowledge is sought by those consumers rather than how knowledge is constituted by producers. But most importantly, this classification by Clarkson et al. (2013) might help us to understand how the variation of consumer knowledge could mean different subjectivities (i.e. representations) of consumers.

Similar to Clarkson et al. (2013), Jin et al. (2014) proposes two groups of consumers who rely on different judgments or justifications for variations in prices: high-power status consumers who perceive stronger price unfairness when paying more than other consumers and low-power status consumers who perceive stronger unfairness when paying more than they themselves paid in previous transactions. So this proposition by Jin et al. (2014) also help us to understand the subjective differences between consumers and how their perception of knowledge/power affect their behaviour in the marketplace. But actually this work by Jin et al. (2014) begs a question of whether those consumers make assumptions about unfairness in prices based on knowledge or it is perception of power that drive the way by which knowledge about unfairness in prices is constituted by those consumers. The results from Jin et al. (2014) show that the state of power/knowledge determines consumers' perception of self-importance in connection to normality/abnormality in the marketplace. So this again bring us to the main premise of Foucault's argument regarding the relationship between power and knowledge in society. Indeed, this work by Jin et al. (2014) is a good example which illustrate that power not only serves knowledge but it is also implied in knowledge and the creation of norms and rules in fields of action (i.e. the marketplace).

3.4.2 Consumer Power/Knowledge and Discourse

The previous section focuses on how the relationship between power and knowledge in society is conceptualised from a Foucauldian perspective and how such conceptualisation help us to understand the relationship between consumer power and knowledge in the

context of consumer behaviour. However, this section explores the effect of power as it produces discourse(s) throughout society and social relationships. Building on such exploration is essential in this thesis to introduce how power is related to discursive consumer practices in the marketplace. Nonetheless, it should be noted here that the focus on power as a producer of discourse(s) is not to deny knowledge as an element in the production of discourses. Rather, this thesis focuses on theories of consumer power and how they inform different discourses of consumer empowerment. Also, power and knowledge are implied in one another as argued by Foucault (1977) since power both produces and serves knowledge. Some authors such as Rouse (2005) suggests that Foucault has discussed power as a theme in his works more than he did knowledge. Nonetheless, Rouse (2005) articulates his discussion of knowledge by building upon Foucault's remarks about power. Rouse (2005) also argues that both power and knowledge, from a Foucauldian perspective, hold the same description in terms of their dynamics but he nonetheless argues that there is some variance in different fields in terms of knowledge and power coming together. Therefore, this section discusses power/knowledge rather than either power or knowledge as a producer of consumer discourse(s) consistent with similar discussions by Rouse (2005) and other researchers.

Foucault (1977) argues that power is everywhere distributed throughout society but most noteworthy he made a noble link to the effect of power as it produces a discourse that goes beyond a spoken/written language to the production of truth claims. Nonetheless, linguistic strategies are central to discourses and they work as vehicles for the production of truth claims and constitution of knowledge (Denegri-Knott et al., 2006). In fact, Foucault (1977) associates power to knowledge in the sense of power generating discourses that limit and

define what is knowable (Shankar et al., 2006) or should be known since discourses as argued by Foucault (1977) not only enable social actors but also constrain them.

It seems rather difficult to refer to a robust definition of discourse from the perspective of Foucault since most of his works are translations from French to English. But one of the good definition is perhaps an interpretation of Foucault's work which is put in the words of Weedon (1987, p.108) who define a discourse as:

“ways of constituting knowledge, together with the social practices, forms of subjectivity... Discourses are more than ways of thinking and producing meaning. They constitute the 'nature' of the body, unconscious and conscious mind and emotional life of the subjects they seek to govern”.

The above quotation from Weedon (1987) enable us to understand that a discourse is not fundamentally about the presentation of certain knowledge as meanings in itself (i.e. truth claims) within a given social setting. Rather, a key issue embedded in a discourse is more about how knowledge is produced and how such knowledge comes to form subjects and social practices. In Foucault's term, the formation of subjects refers to how individuals evolve in an iterative process of 'subjectivation' through comprehension of self and the social world in terms of preferences, interests and opinions (Simons and Masschelein, 2010) or how individuals become disciplined in a process of 'individualisation' by which they legitimise their practices and reject those performed by others (Shankar et al., 2006). The subjectivation or individualisation of the practices by an individual corresponds with an objectivation of institutional discourses in the social world (Simons and Masschelein, 2010).

Rancière (1992) give us an example from the political context of immigration in France and other European countries by which a new kind of racism emerge through constitution of

subjects and objects under emerging conditions. Rancière (1992, p.63) refers to the categorisation of workers as immigrant people who lost political name after twenty years and become others without a name or “the object of fear and rejection”. So, those others as put by Rancière (1992, p.63) are “either treated as in need of help, as ‘human beings’ ...or, on the flip side of the humanitarian coin, are treated with fear and hatred”. So, this example by Rancière (1992) shows us how individuals get influenced by the disciplinary power of political institutions (i.e. rejection of racism) but nonetheless individuals are able to individualise a discourse of politics by practices of the self (e.g. interests, preferences, opinions).

The above definition of discourse by Weedon (1987) also refer to the manifestations of discourses. Weedon (1987) describes discourses as ways of constituting not only knowledge alongside social practices but also as ways of constituting material and non-material manifestations of force (i.e. body, unconscious and conscious minds, and emotions) for those social actors who are governed by a given discourse. Indeed, this is consistent with Hook (2001) who stresses that it is important neither to reduce discourses to a set of meanings, representations, stories or statements as proposed by Potter and Wetherell, 1987) or reduce discourses to a set of statements that construct an object as proposed by Parker (1992). Hook (2001) warns that an over emphasis of textuality might lead us to seeing torture, for example, as a form of dialogue by which we restrict the analysis of a discourse to its language and disregard its material correlation of power.

Hook (2001, p.28) argues that a Foucauldian understanding of the nature of discourses does not only revolve around the “textuality” of discourses but also in “the physicality of its effects” and “materiality of its practices”. Therefore, Hook (2001) refers to the analytic approach adopted by Fairclough (1995) who insists that both text and context should be emphasised

in any text analysed as part of a given discourse. Such reference to Fairclough (1995) means that both political and interpersonal contexts in which a claim of knowledge is constituted should be noted by researchers in order to engage with power/purpose of a given discourse (Potter et al., 1990).

The reference to discourse as a product of power/knowledge in society as discussed by Foucault (1977) and other relevant works (Hook, 2001, Weedon, 1987) enable us to understand the effects of discourses in the marketplace. From a Foucauldian perspective, the marketplace can be viewed as a field of experience/action which is established through power/knowledge games among its social actors (e.g. consumers, producers or marketers). Also, consumer power can be understood as the inscription of discourses, languages and structures that are operating through market practices.

3.4.3 Consumer Power and Discursive Practices

Discourse from a Foucauldian perspective constitutes and reproduces social system through the exercise of power in society. In this sense, Foucault (1981) refers to discursive practices as the set of rules, procedures and systems which manifest the order of a discourse by which knowledge is formed and produced (Young, 1981). Hook (2001) perhaps offer a straightforward explanation of discursive practices as those which enable or limit the functioning of a given discourse in terms of writing, speaking and thinking. Such discursive practices (i.e. rules and categories), according to Young (1981), become priori element of a discourse in such a way it becomes impossible to think out of them. Consequently, Young (1981) views discursive rules and categories as in strong correlation with the exercise of power. Overall, there are two broad ways to think of how discursive consumer practices are linked with market discourse.

3.4.3.1 Discursive Practices as Complementary Mechanism to Market Power

Young (1981) reminds us of the political context of discursive practices in society as an employment of multiple procedures that are selected, excluded and dominated. Consequently, this reference to the political context of discursive practices by Young (1981) might illustrate how discourse(s) in a given institution such as a school or a university by definition reinforce a set of rules and categories through the exercise of power/knowledge. In this sense, an enforcement of some rules and categories would then mean an elimination of another set of rules and categories.

Hook (2001) refers to the productive mechanism of discursive practices through forms of exclusions and choices. Hook (2001) perhaps offers an encompassing account of Foucault's (1981) reference to the domination effect of a discourse through a combination of complementary discursive practices: exclusions and choices. In this sense, it becomes possible for us to understand how a given discourse in the market, for instance, might advocate consumer participation but in practice advocate producers' control over consumers through its set of rules and categories (i.e. producer discursive practices). A good example is the work by Zwick et al. (2008) who perhaps offer a political reading on the practice of co-creation of a value from the perspective of firms. Zwick et al. (2008) suggest that co-creation of value is a corporate discourse advocated as consumer empowerment that is rather a discursive practice for consumer control by firms.

There are more examples of corporate discursive practices (e.g. Fuchs and Kalfagianni, 2009; Sturzaker and Shucksmith, 2011), but this thesis, in line with its objectives, focuses on discursive practices by consumers rather than firms. Such examples from discursive corporate practices is related to this section in terms of understanding consumers' reaction to the exclusionary discourse effect in the market. Hook (2001) focuses on exclusionary

effect to discourse because both choices and exclusions effects are complementary and inclusive of each other; this is evident in the work by Foucault (1981) who revolves much of his discussion to the exclusionary effect of a discourse.

In the context of consumer behaviour, there are examples of discursive practices by consumers that can be understood as reaction to systems of exclusions by market discourses. For example, some consumer practices might be questionable in some markets as right or wrong, normal or defiant (e.g. opposition between true and false in Foucault's terms). Dootson et al. (2016) refer to deviant consumer behaviour in the marketplace as an ongoing problem causing harm to commercial companies and other consumers. Dootson et al. (2016) explore consumer perceptions of right and wrong and suggest that some consumer behaviours are viewed as more unethical or serious than others. However, this study by Dootson et al. (2016) is understood as an attempt to objectify a discourse of consumer abnormality. If the work by Dootson et al. (2016) is analysed from a Foucauldian perspective, it would be then possible to suspect consumer abnormality as a discourse to conceal another discourse of powerful producers (e.g. firms, manufacturers and marketers).

Some questions that might challenge such attempt to objectify a discourse of consumer abnormality by Dootson et al. (2016) would be concerned with the multiple meanings of consumers' practices such as why unethical behaviours vary among consumers and/or other companies? would a defiant consumer behaviour sustain its position in the present time if challenged by an alternative corporate model. Yu et al. (2015) perhaps offer an extreme example of consumer abnormality in the context of software industry. Nonetheless, Yu et al. (2015) suggest that this question of abnormality is perceived as not relevant for those consumers who take the risks associated with piracy as those customers view their

practices to be taking from the upper class (software producers) and giving to the lower class.

Yu et al. (2015), up until their conclusion, show that heroism explain such sharing behaviour of consumers. So once again this is a question about whether digital piracy a form of unethical consumer behaviour or a form of social heroism in response to a digital capitalist society. If put in terms of the results by Lysonski and Durvasula (2008) who report that digital piracy continues at a high rate since most users believe it is not ethically wrong, it would then be rather plausible to think of a problematic model of digital capitalism than to think of most citizens of the internet as unethical consumers. In contrast to the above discussion, Holt (2002, p.80) argues that consumers seek a cultural type of production through interactions with markets and firms:

“Cultural producers—artists, journalists, academics, filmmakers, musicians—find in these tensions fertile ground for creative expression...Firms and consumers, drawing from these experiments in pursuit of their differing interests, engage in a collective selection process through which a new consumer culture and new branding paradigm become institutionalized”.

Holt (2002) refer to the tensions that emerge between consumers and producers and refers to consumers, within multiple contexts, as partners in a power game with marketers through discursive practices that legitimise consumers' actions and modify the market space (i.e. field of action) through a collective selection process with firms. Nonetheless, Holt (2002) suggests that both consumers and producers satisfy their multiple life projects, interests and creativity through such power game in the market. Therefore, Holt (2002) offers us an explanation of consumer discursive practices as a mechanism to complement rather than

conflict with market power. Thus, Holt (2002) enable us to think of digital piracy, for instance, as a form of consumer activity to constitute new knowledge in the industry of online consumption rather than resist with consumer culture. Indeed, discursive practices of consumers can be also viewed only as a resistance mechanism to some models of digital capitalism since different consumers and firms have different interests as discussed next.

3.4.3.2 Discursive Practices as Resistance Mechanism to Market Power

Foucault (1977) suggest that power is always associated with resistance. This then enable us to think of discursive practices as resistance to market power. There are some works in the consumer research literature which focus on resistance as discursive practices by consumers to market discourse imposed by producers. For example, Kerr et al., (2012) examine the concept of consumer power, as a collective organised practice in the context of online blogging. Kerr et al., (2012) suggest that collective power is evident in terms of the regulation of advertising; bloggers resist market power through self-regulatory process (e.g. distributing information, opinion, and banning advertising material). Kerr et al., (2012) note the importance of practices by those bloggers as potential to form online pressure groups. Among groups of peer consumers. So this study by Kerr et al., (2012) illustrate the potential of online consumers to become self-regulatory and achieve a level of consumer agency.

Similar to Kerr et al., (2012), Rezabakhsh et al. (2006) analyses consumer power in traditional markets and compares it to the situation on the Internet. Rezabakhsh et al. (2006) shows that the Internet enables consumers to resist market power through its enabling effect as a source of information to reduce the knowledge gap and transparency in traditional markets. Rezabakhsh et al. (2006) suggest that online consumers band together against companies and impose sanctions via exit and voice, and influence products and prices. However, such resistance power recognised by Rezabakhsh et al. (2006) is more consistent

in terms of individual preferences of those consumers rather than as a collective action. So the enabling effect of the internet is questioned as a collective action of resistance in terms of resistance to market power since producers are also able to access the internet, respond and modify the market as a field of action to normalise resisting behaviour of consumers as individuals.

Labrecque et al. (2013) also highlight technology's evolutionary role in the development of consumer power as a mechanism to resist market power. Labrecque et al. (2013) suggest that consumers' everyday activities are not controlled by information imposed by producers since consumers especially bloggers are able to use search algorithms and influence consumption decisions through recommendations and product tests distributed through social media. Labrecque et al. (2013) also claim that consumers adjust browsing behaviours in response to the fear that providing personal information would give companies too much power over them. However, this proposition by Labrecque et al. (2013) would be more relevant to some individuals and groups of consumers rather than mainstream or public mass of consumers. It is hardly possible to think of resistance as a totality of struggle between consumers and producers in all contexts and markets. Also, consumers have different subjectivities by which some of them are not even bothered to get involved in a movement of resistance for improving overall trading conditions. Rather, resistance is more consistent as an action by some not all customers to make changes in the marketplace through supporting some practices by companies against others.

3.5 Prosumption as a Discursive Practice of Empowerment

Hook (2001), based on Foucault (1981), help us to understand prosumption as a discursive practice of empowerment by members in Instructables. Hook (2001) once again refers to two types of discursive practices that produce exclusionary mechanisms to discourses in social spaces: external and internal systems of exclusion. Hook (2001) emphasises the effect of external systems of exclusion (i.e. the outside thinking of a discourse) more than the effect of internal systems of exclusion (i.e. the inside thinking of a discourse). For instance, Hook (2001) views such external limitations (e.g. taboos, rituals and oppositions between true and false) more critical to discourses critique than internal limitations (e.g. discipline, author and commentary). For Foucault (1981), taboos and rituals as prohibitions are more observable and common in the discussions of politics and sexuality while the oppositions between true and false requires more attention in order to observe its exclusionary mechanism to discourses (Hook, 2001).

Building on Hook (2001), consumer productivity can be understood either through consumers working individually or together (i.e. prosumers) as opposed to those who are working with companies (i.e. co-creator consumers). Consumer productivity alone or with other consumers enable us to think out of the discourse of corporate power. Some researchers, similar to prosumption, have also associated consumer co-creation with consumer empowerment (e.g. Marandi et al., 2010; Bonsu and Darmody, 2008). So, it might be argued that both prosumption and consumer co-creation are practices that empower rather than exploit consumers.

Several researchers have addressed consumer co-creation as a practice of consumer empowerment. For example, based on a case study of the Iran presidential election Marandi et al. (2010) show that Facebook proved a useful communication medium in a political

context between co-creators. They suggest that such practise of consumer co-creation empowers users of the site through mobilising unconnected people as co-creators of value. However, such example of the empowered co-creator in Facebook has become an issue of debate among consumer researchers. Zwick et al. (2008) explicitly refer to such practice of value co-creation and associate it with consumer exploitation rather than consumer empowerment. Zwick et al. (2008, p.185) on this basis suggest that empowering consumers is just a corporate discourse to exploit rather than empower consumers:

“Enlisting customers as producers and charging them for their own work constitutes an interesting contradiction that points to the importance of promoting a discourse of empowerment and self-actualization in conjunction with that of co-creation.”

Other researchers (Ritzer and Jurgenson., 2010; Cova and Dalli., (2008) suggest this practice of co-creation of value in social networking sites and other free internet services as a major trend toward unpaid rather than paid labour by users in exchange for products offered by producers at no cost. Rather than viewing users as exploited by online service providers, they propose the possibility of a new emerging economic system. They present Cyber-Libertarian, who strongly believes in individualism and democracy in their relationship with the internet, as an example of the difficulty to control users.

Bonsu and Darmody (2008), in line with Zwick et al. (2008) also draw on their participant observation in Second Life, a 3D virtual community, but they suggest that members of this community as collective co-creators are empowered in variety of ways but they suggest that empowerment of users also entails producing capital for the commercial firm managing the community. Overall, all the above researchers have associated the empowering potential of consumer co-creation of value with another form of labour exploitation.

The literature is rich with examples of firms capitalising on consumers' productivity and creativity in diverse ways (e.g. Terranova, 2000; Huhn, 2004; Prahalad and Ramaswamy, 2000). In contrast, the notion of consumers capitalising on productivity is seemingly overlooked in the consumer and marketing research. Indeed, prosumers can individually and collectively capitalise on market resources such as brands, products and materials to produce things of value that are more useful to them.

There are references in the marketing and consumer literature which describe prosumption as a practise of empowerment. For example, Wolf and McQuitty (2011) suggest that prosumers who produce some of their products and services through DIY projects achieve a sense of individual empowerment. They suggest that prosumers achieve individual empowerment through their involvement in many of the physical tasks (e.g. building, modifying and repairing something) without the help of professionals. Kozinets et al. (2008) and Moraes et al. (2010) also suggest that collective consumer behaviour is associated with a sense of empowerment through engagement in production of goods and services in line with consumers' ethical perspectives.

Other researchers also highlight the empowering potential of prosumption at a collective level (Bekin et al., 2006; Shaw et al., 2006; Jarrett, 2003; Cova and Pace, 2006). For example, Bekin et al. (2006, p.37) refer to a UK-based new consumption community known as "Woodland" and suggest that members of such community empower themselves through the production of some vegetables and fruits for their own consumption. So, the consumers in this community can be viewed as prosumers who collectively empower themselves through engagement with the production of some of their food rather than becoming entirely dependent on the marketplace. Ravid et al. (2008), similar to Bekin et al. (2006), also refer to the empowering potential of production at a collective level. However, the authors focus

on a group of online consumers who collectively empower themselves through their engagement with the production of digital rather than material products. They conclude by highlighting the empowering potential of producing wiki-textbooks (digital books) by the online consumers who produce them. Therefore, the online consumers discussed by Ravid et al. (2008) can be viewed as prosumers who collectively empower themselves through the production of digital products in an online community rather than becoming entirely reliant on the marketplace. Nevertheless, both works by Bekin et al. (2006) and Ravid et al. (2008) overlook the potential of empowerment as peer-to-peer production among individuals who join as members in such offline or online communities.

3.6 Summary

This chapter has mainly integrated Denegri-Knott et al.'s (2006) map of consumer power alongside the matrix of power relations proposed by Tew (2006) to evaluate the consumer empowerment literature and understand the diverse discourses of consumer empowerment. Three discourses of consumer empowerment were proposed: empowerment through consumer sovereignty, empowerment through consumer resistance, and empowerment through consumer productivity.

Prosumption through enabling consumers to produce some of their products is increasingly labelled as a practice of empowerment. Nonetheless, little is known about how prosumption empowers individual and collective prosumers. Yet, there is much social sciences research on empowerment alongside different explanations of consumer empowerment in marketing, which together contribute to the complicated and contested meanings associated with consumer empowerment. It would be rather difficult to interrogate the empowering potential of prosumption as aimed in this thesis without discussing what is understood by consumer empowerment.

Research on consumer empowerment makes it difficult to offer a universal definition of the concept since any proposed definition will depend on conceptualisations of power. Thus, it is more helpful to review the relationship between empowerment and power in order to understand consumer empowerment, which is what this chapter sought to address. The findings from the literature especially the noble ideas from power/knowledge offered by Foucault (1977) enable a rethinking of prosumption as a discursive practice that is related to the constitution of new knowledge and creation of new consumer subjects.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 Introduction

There are many reasons why researchers choose to engage in a specific field of study, which is often illustrated in their responses to questions such as 'why' and 'what'. Other questions such as 'how' to research require deeper philosophical introspection in order to choose the most appropriate methodology for the research problem (Holden and Lynch, 2004). Philosophy clarifies our concepts; it goes beyond the boundaries of different disciplines and asks questions that challenge our taken-for-granted assumptions (Williams and May, 1996). Thus, philosophy raises important questions about the methodological approaches that researchers use to establish knowledge (Saunders et al., 2009). Philosophy offers a theoretical map that help researchers to refine and choose their research methods (Benton and Craib, 2001).

There is a debate in the research philosophy literature about whether researchers need to adopt a philosophical position before or after defining their research problem. Many researchers such as Denzin and Lincoln (1994), Shih (1998), Holden and Lynch (2004), and Easterby-Smith (1997) note that the choice of research methodology should follow the researcher's philosophical position and the nature of the phenomenon to be examined. On this basis, some researchers such as Proctor (1998) assert that it is essential to maintain consistency between the objective(s) of a study, its research questions, the selected method(s) and the philosophical position of the researcher. Other researchers such as Holden and Lynch (2004) encourage researchers to focus on research problems which are compatible with an 'in-between' philosophical position, which consequently allows the researcher to match philosophy, methodology and research problem.

This chapter is divided into four sections. The chapter begins by reviewing the diverse positions presented in the research philosophy literature in order to adopt a philosophical position supporting the present study. Following that, the chapter presents netnography as the research methodology which has been adopted in line with the philosophical position and the problem to be researched. Then, the chapter discusses the selection of an online community following the selection of a netnographic methodology. Finally, the chapter describes in detail the implementation of the research methods throughout the study's overlapping phases.

4.2 Research Philosophy and Researcher's Position

Burrell and Morgan (1979) suggest that there are two dimensions which shape philosophical positions of researchers: the nature of science and the nature of society. They associate each of these dimensions to different methodological choices. Holden and Lynch (2004) build on the understanding of these two dimensions and help researchers in social sciences to choose the appropriate methodology. Holden and Lynch (2004) illustrate that the scientific dimension requires social researchers making a choice between two extreme philosophical positions, namely subjective or objective. Such choice of philosophical position is often determined by the extent to which a researcher gets involved in the process of research. Extreme subjectivists argue that researchers cannot eliminate their personal inferences (i.e. bias) from the research process. Subjectivists acknowledge the influence of personal (i.e. subjective) interferences of researchers within the knowledge claims presented in any given research project. In this sense, subjectivists suggest that the establishment of any knowledge claim requires researchers to interact with the subjects of their research. Thus, observers for example produce knowledge claims through participant observation with people and society representing the focus of their projects.

Contrary to subjectivists, objectivists argue that researchers can eliminate personal biases in the process of research. Objectivists attempt to exclude their personal inferences from the research process. Nonetheless, most researchers in social sciences go beyond extreme subjectivism or objectivism (Holden and Lynch, 2004). In fact, many researchers in social sciences often select intermediate positions which are more compatible with social enquiries as documented in several academic works using mixed methods (Creswell, 2009, Tashakkori and Teddlie, 2003).

Holden and Lynch (2004) also refer to the social dimension alongside the scientific dimension and suggest that researchers need to make a choice between two extreme positions for understanding the social world, namely a sociology of regulation or a radical change sociology. Researchers following the former position contend that society develops rationally according to social structures, in line with a regular (i.e. consistent) understanding of social behaviour, whereas researchers following the latter position suggest that society develops radically against social structures from a radical (i.e. inconsistent) understanding of social behaviour.

The above discussion comprising the two dimensions proposed by Burrell and Morgan (1979) helps us to delineate the boundaries between the differing philosophical positions followed by social researchers. An objectivist position resonates with 'quantitative', 'positivist', 'naturalist', 'scientific' and 'experimentalist' social research approaches, whereas a subjective position corresponds with 'qualitative', 'phenomenological', 'humanistic', and 'interpretivist' research (Hussey and Hussey, 1997). In this study, positivism and its varied strands commonly refer to the use of natural or quantitative research methods in the investigation of social phenomena. However, post-positivism in line with the

acknowledgement by Crossan (2003) opposes positivism and refer to the description and exploration of social phenomena using qualitative research methods.

Burrell and Morgan (1979) integrate the scientific dimension (subjectivism in contrast to objectivism) and the social dimension (sociology of regulation in contrast to sociology of radical change) in order to map out four mutually exclusive paradigms for researchers of social phenomena: radical humanism, radical structuralism, functionalism and interpretivism. As shown below in figure 1, both humanists and structuralists advocate a sociology of radical change position alongside an objectivist position while functionalists and interpretivists advocate a sociology of regulation position alongside a subjective position. This mutually exclusive delineation of the four paradigms by Burrell and Morgan (1979) enables us to evaluate the extent to which researchers focus on society as a place for unity (or cohesiveness) in line with a regular social order position rather than understanding society as a place for conflict (or contradiction) which is more consistent with a radical society.

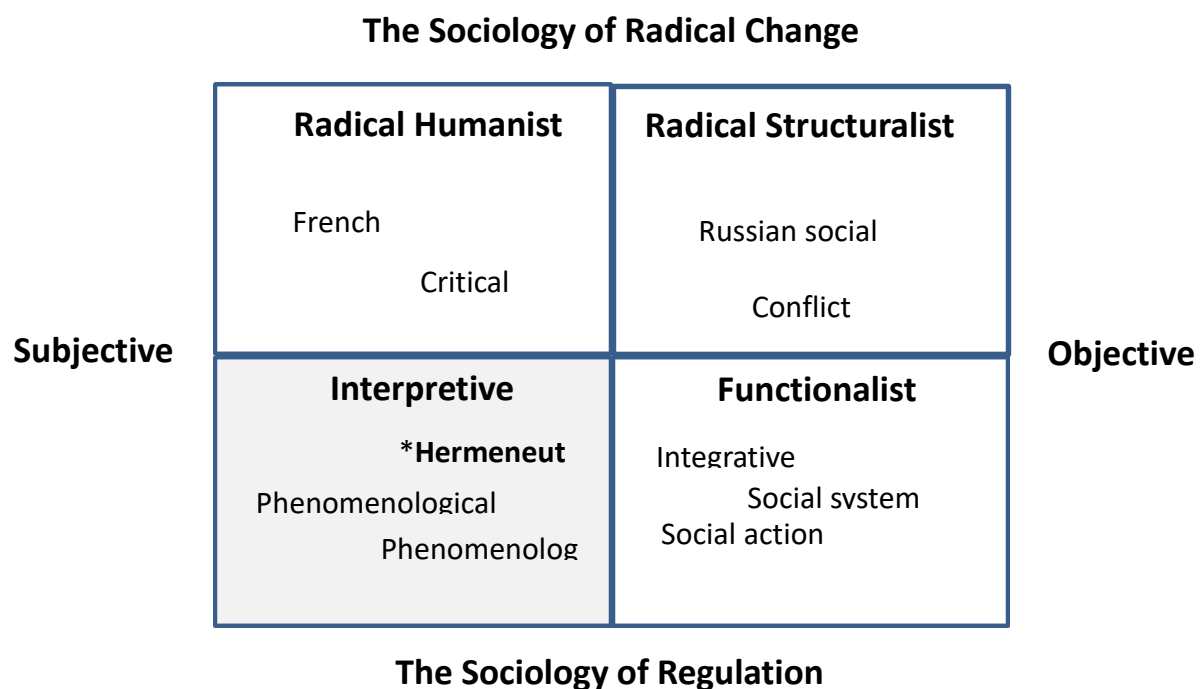


Figure 1 Researcher's Position within Paradigms by Burrell and Morgan.

In line with Burrell and Morgan (1979) and their emphasis on the four paradigms for social research, this study is informed by various works including critical reviews of social science as well as relevant practical and methodological guidelines (Bishop, 2007, N. Blaikie, 2007, Burrell and Morgan, 1979, Delanty and Strydom, 2003, Holden and Lynch, 2004, Porta and Keating, 2008). Such reviews help us to understand how positivism (or objectivism) is largely criticised and questioned as the sole mode for social research. The critique of positivism is primarily linked to the extent to which methods of natural sciences (i.e. quantitative research methods) can be used to study human behaviour and society. On this basis, positivism through its methods of natural sciences is viewed less relevant or useful within cultural and social studies. This position corresponds with the discussions of many researchers such as Popper (1959; 2005), Bronowski (1956), Delanty and Strydom (2003), Crotty (2005). The

main concern with positivism is better explained by Smith (1998) who points out that positivists equate social objects to natural objects as things which can be studied as hard facts while relationships between these facts are reported as scientific laws.

From a sociological dimension, positivism is also understood as the most traditional philosophy in social research (Blaikie, 1993). But Positivism is like other traditional post-positivism philosophies such as interpretivism. Both philosophies generally share similar assumptions about the regularity of social behaviour (Blaikie, 1993). While positivists assert that human behaviour can be consistently observed by human senses, interpretivists view social behaviour as the outcome of an already interpreted world through meanings produced by participants in social life. Positivists employ objective procedures to satisfy the truthfulness of any theory, while interpretivists propose that social behaviour can be understood and explained by models of typical meanings in typical situations (Blaikie, 1993). Therefore, interpretivists aim to provide alternative objective methods for the social world through constructing verifiable knowledge of social meanings (Bishop, 2007). Hence, the common ground of traditional philosophies for social behaviour is that reality can be observed, understood, and perhaps generalised.

The position adopted in this study is that contemporary philosophies of social science fundamentally challenge traditional philosophies (e.g. positivism and interpretivism), and offer insights for social research projects. Contemporary philosophies such as critical theory, postmodernism, and modern hermeneutics, offer much more complex insights into social reality (Blaikie, 1993). These contemporary philosophies have been regarded as critical of positivism, but nevertheless more consistent with interpretivism. For example, the critical theory by Habermas (1990), in line with interpretivism, accepts the nature of an interpreted social world as well as its methodological implications (Blaikie, 1993). Nonetheless, from

the perspective of critical theorists, there is a rooted bias in determining what can be regarded as a reality by any proposed theory (Blaikie, 1993). The assumptions embedded in any proposed social theory and common sense thinking affects production of knowledge, which implies that observation is impossible in any objective sense. Therefore, critical social scientists primarily focus on the evaluative dimension of social enquiry. As interpretation becomes inescapable, critical thinkers insist that there is a need to make the best of values and freedom morals, and subject all hidden biases to serious critique (Bishop, 2007).

Similar to critical thinkers, postmodernists argue that there is no objective, fixed human nature as thought by modern and pre-modern philosophers; all social interpretations are subject to culture (Bishop, 2007). In other words, culture frames social behaviour and shapes our human nature. In this sense, modernism is criticized as inappropriate for the study of complex social problems (Holden and Lynch, 2004). Modernism as a philosophical assumption requires reducing society into simple categories such as subject/object, male/female, where a specific category is usually given supremacy over the other; this status is criticised by postmodernism as an unsuccessful attempt to justify partial truths (Firat and Venkatesh, 1995). As put by Firat and Venkatesh (1995, p.240), "postmodernists point out that what we see around us are not just the products of science and technology, but the processes of cultural presence that include aesthetics, language, discourses, and practices." Similarly, in modern hermeneutics, the interpreter needs to engage in a dialogue with the linguistic meaning to explore the embedded rather than the intended meaning of a written text (Habermas, 1990).

Each mode of social enquiry, from traditional to contemporary perspectives, offers some useful thoughts on social phenomena. However, contemporary perspectives, which emphasise interpretive practises, offer deeper understanding of the complex social

behaviour. The social phenomena operate beyond the worlds of natural sciences. In social sciences, there is a constant need to address the intellectuality, richness, and openness of social life. Interpretation is a key element to differentiate social truth from natural sciences. Postmodernists and modern hermeneutic thinkers conceive of social reality as multiple and interpretive in its historical context (Firat and Dholakia, 2006; Hirschman, 1986). However, unlike postmodern theorists, hermeneutic thinkers are not extreme opponents to absolutes; social forces are not seen as deterministic in the sense often proposed by postmodernism; the hermeneutic view accepts absolutes that are persistent as natural patterns or moral universals, but it also accepts that absolutes can be interpreted in multiple ways (Bishop, 2007). Although researcher's position has developed in line with what can be known as the interpretive tradition in social research (Delanty and Strydom, 2003), the hermeneutic view is particularly relevant for this study (see figure 1).

This research adopts the hermeneutic framework of interpretation. Hermeneutics rejects the sharp divisions between the researcher on one side, and the researched world on the other (e.g. Bishop, 2007). In hermeneutics, everyday life, values, and meanings are experienced by the researcher as much as they are experienced by the researched world. Consequently, the position of the researcher in this study follows scholars who reject the idea of a completely objective world (Bate, 1997, Watson, 1994). There are multiple realities in the world, and each individual perceives, understands and experiences reality in their way (Bishop, 2007, Brewer, 2005). Researchers cannot distance themselves from the reality observed, and knowledge of the world is gained through the lived experiences of individuals. Therefore, such researcher-to-participant engagement occurs as put by Gadamer (1989, xiv) "the way that we experience one another, the way that we experience historical traditions, the way that we experience the natural givenness of our existence and of our world, constitutes a

truly hermeneutic universe.” However, this is not achieved through living isolated experiences of individuals, but through conversation which is considered a key element of contemporary hermeneutics, which distinguishes it from all other modes of social enquiry (Bishop, 2007). In short, the researcher’s philosophical position corresponds with a hermeneutic-informed interpretivism, which as the best philosophical position to address the research problem addressed in this study in line with a hermeneutic framework of interpretation.

4.3 Netnography

This section presents netnography as the research methodology which has been selected following an interpretivist philosophical position and the nature of research problem. Netnography (Kozinets, 2002; 2010) or virtual ethnography (Hine, 2000; Kozinets, 2002; 2010), uses ethnographic research methods “to study the cultures and communities that are emerging through computer-mediated communications” (Kozinets, 2002, p.62; 2006). Netnographic methods are increasingly used in studies of computer-mediated communications (Kozinets, 1997; Langer and Beckman, 2005; Nelson and Otnes, 2005), given that a netnographic approach can be employed effectively to collect rich data about consumers in online communities (Kozinets, 2010).

The netnographic methods are becoming very popular in marketing as well as other disciplines. There are series of netnographic works such as those conducted and published by Kozinets (1997; 1998; 2002; 2006; 2008) and other scholars (e.g. Langer and Beckman, 2005; Nelson and Otnes, 2005). Kozinets (2010) lays out the foundation for the conduct of netnographic research especially to novice researchers in his book entitled ‘netnography: doing ethnographic research online’. Such online communities are increasingly becoming a good place for understanding consumer behaviour. Schibrowsky et al. (2007), in a

quantitative review of the internet marketing literature, show that online consumer behaviour topics account for nearly 50% of published marketing research between 2004 and 2006. In this sense, the observation of consumer behaviour in online contexts can help marketing scholars to understand consumers' self-representations and their structures of meaning (Kozinets, 2010).

Netnography includes participation in and observation of online discourses that enable insights into the attitudes, meanings, and consumption discourses of online groups (Hamilton and Hewer, 2010; Jayanti, 2010; Kozinets, 2002; 2006; 2010). Therefore, it is important here to refer to the application of discourse analysis as a constituent tool of the netnographic approach adopted in line with a model of discursive power. In this way, netnography is used as a methodological platform that attend to the thesis' aim and objectives. So, this thesis benefits from some of the discussions offered by Hook (2001) to inform a better understanding of discourse analysis from a Foucauldian perspective, particularly in his works on discursive practices.

In line with the present study, a netnographic approach can be used to observe, analyse and interpret social interactions of consumers within online groups while the reporting on these interactions contributes toward systematic understanding of prosumption in online communities. One of the basic assumptions in social research is that the choice of research method should be directly related to the nature of data to be collected as well as the nature of the problem to be investigated (De Vaus, 2001). Overall, this makes netnography appropriate for the exploration of prosumption in an online community. The netnographic approach for the present study has been extended beyond the observation of textual discourse, to encompass online data collection of prosumer-generated visual representations of prosumption. Methodological innovations are important in that they can

contribute original understanding of a phenomenon, and prosumer-generated visual data in particular can allow for new meanings and therefore new types of knowledge to develop, based on the perspective of the prosumer (Michaelidou et al., 2013). “Although written and visual analytical processes can be very different and difficult to integrate, they both require meaningful textual coding that resonates with a specific research aim” (Michaelidou et al., 2013, p.5). Previous studies have used such an approach, following a “call for more pluralistic approaches in [data] analysis” (MacKay and Couldwell, 2004, p.390). Furthermore, the use of photographs as documentary evidence and illustration of written descriptions is common in ethnographic works (Pauwels, 1996; Rieger, 1996; Stoller, 1997). This is consistent with the view that both written and visual data work together to produce ethnographic (or netnographic) meanings (Pink, 2007).

In comparison to other research approaches, Kozinets (2002) suggests that netnography is far cheaper, quicker, and less obtrusive in many cases of social research. It gives the researcher the ability to directly observe the behaviour of consumers as both individuals and within groups. Kozinets (2002) stresses that the nature of the netnographic method enables researchers to access aspects of online social life that might not be possible through other methods. In order to be employed effectively, however, researchers need to be aware of its limitations. Specifically, netnography is completely focused on online behaviour and virtual contexts where participants are engaged in intangible interactions (Kozinets, 2002). In addition, the rate at which consumers participate in these virtual contexts is often linked to consumers’ modes of online socialisation. For example, strangers can socialize as “free riders” who may come and go (Mathwick et al., 2008). Therefore, researchers require higher interpretive skills in order to understand online consumer communities and gather relevant information.

A number of netnographic studies have been used as references to clarify the practicality and credibility of a netnographic approach in research (Giesler, 2006, Kozinets, 1998, 2002, Langer and Beckman, 2005, Mathwick et al., 2008, Nelson and Otnes, 2005, Richardson, 2004). For example, Avery (2007) chooses to study a community of brand enthusiasts and how they use the brand as a tool to achieve their identity objectives. Mathwick et al. (2008) offer another relevant netnographic example in which they examine the relational norms that determine social capital in a peer-to-peer market-based context. Such studies help interested researchers to employ netnography as an appropriate method for understanding social consumer behaviour in online communities.

4.4 The Selection of an Online Community

The development of information technology, especially the Internet, has enabled consumers to get together regardless of time or location, and they can now access each other and join groups based on a diverse range of cultural and sub-cultural interests (Kozinets, 1999). Rheingold (1993, p.5) regards virtual communities as the earliest type of social communities on the internet, and defines them as “social aggregations that emerge from the net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace”.

Social aggregations, which are implicitly or explicitly centred on consumption-related interests, are considered “virtual communities of consumption” (Kozinets, 1997, R.V. Kozinets and Handelman, 1998). Other marketing researchers use similar terms to refer to consumers groups, including “subcultures of consumption” (Schouten and McAlexander, 1995), “e-tribes” (Cova et al., 2007), “brand communities” (Muniz Jr and O’Guinn, 2001). Although these terms may be used differently, there is a considerable overlap in their definitions. Based on such definitions, online community is defined here as a community of

practise where a group of consumers are working together in order to share market-based knowledge and accomplish their individual and collective goals.

In line with a netnographic approach, researchers need to locate an online community or group of communities that are relevant to their topic and research questions (Kozinets, 2010). On this basis, a broad range of websites have been used to identify the most relevant online communities for the purpose of the present research. Following a similar process to that of Healy and Beverland (2013), time has been spent using online search engines such as Google, Yahoo and Bing, as well as niche directories of online communities including Dmos, Big-boards, Forum Finder and Forums Directory, to find communities that fit the purpose of this study. Some of these sites also provide useful categorizations of websites according to various features such as topics, regions and other important features. Thus, the categories were reviewed extensively by topic to identify all potential websites which host relevant potential communities of prosumption. Accordingly, a potential list of twelve websites was identified which are largely focused on sharing home-made based projects.

Such home-based projects can be seen as a popular form of prosumption particularly among western-based communities. For example, many popular stores in the UK and Europe today such as Focus and Homebase sell a large range of household items including decorative materials, tools and electrical hardware. These are supplied for direct use by consumers or businesses (see Datamonitor, 2009a; 2009b). Many of these projects require consumers to consult online for information and seek advice from other consumers. On this basis, the search for potential community(ies) was purposefully focused on potential communities which resemble forms of sharing within 'know-how home-based' projects. After some lurking, a number of online communities were shortlisted. In order to arrive at the best potential online community for this study, the netnographic selection criteria proposed by

Kozinets (2010) were used, namely relevance of data to research questions, regular communications, interactive communications between members, substantial number of participants, different types of participation and richness of descriptive data. Nonetheless, Kozinets (2010) has almost overlooked the significance of the structure of the online community(ies) to be selected for any netnographic research. It seems that most of these criteria proposed by Kozinets (2010) are more relevant as milestones for comparisons of potential online communities with similar structures. However, online communities may evolve around different structures of online communications such as blogs, wikis, audio/visual sites, social content aggregators, social networking sites and online forums. Consequently, a netnographer needs to make a preliminary decision regarding the structure of the online community(ies) before looking at these criteria.

In comparison to social networking and social media sites, discussion forums can be simultaneously general and specialized as all registered members have equal opportunities to participate and post their own messages and enquiries. Users routinely refer to these discussion forums to post questions, place enquiries and receive answers (Kozinets, 1999). Discussion forums may offer more updated, customized and specialized information than other arrangements of the internet sites. Such discussion forums are typically used to build relationships between members, which is often based on contents' sharing and 'know how' techniques more than family and friends oriented sites such as Facebook, Myspace and similar social networking sites. Discussion forums are also very popular sites for netnographic research (see e.g. Kozinets 1997; Langer and Beckman 2005; Nelson and Otnes 2005). As public sites, they offer easier procedures for data archival with access to detailed and rich-data experience from various participants. Nevertheless, it is observed that most discussion forums are often restricted to the exchange of text-based messages.

The above description presents the criteria that were used to select the most appropriate online community for the present study. Instructables.com was selected as it was considered the most appropriate online community with regular, diverse and sufficient participation, as well as relevant and specific data for understanding prosumer behaviour. Instructables is an online community that aims to motivate its members to publish and share their projects online with other members in the community, which in turn is in line with the practices of prosumers. From an empirical perspective, Instructables offers a site in which one can explore the nature and process of prosumption through varied prosumer experiences and do-it-yourself projects. Furthermore, Instructables.com offers rich visual data in addition to a wealth of descriptive data, which allows for a multimodal (Dicks et al., 2006; Healy and Beverland, 2013) exploration of the field. This richness of data can be used effectively for the purposes of this study, as it is in line with the exploratory nature of its objectives as well as its visually-informed netnographic approach. Experiences of individual, peer-to-peer, and collective members in Instructables were observed as the units of analysis in order to achieve the main purpose of the study. The experiences of members in Instructables were employed to demonstrate the nature of prosumption and interrogate it as a practice of consumer empowerment. Also, the use of a single online community is justified because ethnographic approaches involve the detailed exploration of a few examples or even just a single case that is a particularly good illustration of the phenomenon under investigation (Atkinson and Hammersley, 1994; Elliott and Jankel-Elliott, 2003). Instructables.com offers deep insights into prosumption and therefore can be used in its own right.

Finally, it is useful to note that Instructables is an open source community which means that users of the site (i.e. the platform of the community) are not required to pay in order to become members or upload projects in the community. Moreover, visitors of the site can

browse, access and reuse most if not all projects in the community which are often licenced as 'creative commons'. Such licence as described in the community make it possible for any internet user to copy and redistribute the printed description of the majority of projects in Instructables in any medium or format. It is also possible for users to build upon projects in such a derivative manner for the purpose of their own other projects. The community was founded by some students at Massachusetts Institute of Technology (MIT) who used to share their lap projects in a blogging site which then was expanded as a documentation system.

4.5 The Use of the Netnographic Methods

A netnographic method requires a degree of participant-observation within the researched community; this emerging research method involves the application of ethnography to online spaces (Kozinets, 2002). A netnographer uses online communications as a source of data to arrive at an ethnographic understanding of the researched culture or phenomenon. But the researcher is expected to acknowledge the lived experiences of online participants. This may require the use of similar techniques employed in offline ethnographies such as interviews, descriptive statistics, archival data collection, case analysis, videography, and other related techniques. Thus, it is important to show how netnography can employ various research techniques in the overall process of netnographic research.

In order to engage in the method of netnography, several key phases for the regulation and implementation of netnographic research were adopted from Kozinets (2010) including planning and entrée, data collection and analysis (combined as one phase rather than two phases), ensuring ethical standards, and representation and evaluation. These phases were adopted and used throughout the research as explained below.

4.5.1 Planning and Entrée

Planning and entrée are essential at the beginning of any netnography to be carried out in an appropriate way. After the online community (i.e. Instructables.com) has been selected, a netnographer is expected to make key decisions concerning how the research is going to be conducted, and how the researcher is going to represent himself to the community. But planning in netnography requires communicating with members of the selected community rather than using data from a website or a server (Kozinets, 2010). Accordingly, members' interactions in the community were observed through both participant and non-participant observations after securing permission from the site-moderator as well as a number of interested members. Participant observation allowed the researcher to create direct relationships with some members of the community. Thus, participation required some involvement with members in Instructables rather than leading the community or getting engaged in every type of community activity (Kozinets, 2010).

A number of potential Instructables participants were initially selected and invited to take part in this study on the basis of their membership activity in the community. Those participants were initially selected from the community regardless of their demographics. Eventually, some participants were excluded from the initial selection for practical reasons. For instance, some members were excluded because they were youngsters under eighteen years old. It might be difficult to obtain a consent for an online interview with a member whose age is under 18 since it might also require parental consent. However, the age of members was not always stated in their Instructables' profiles. In such cases, photographs or public information in the site were used to predict the potential age of such members. Several non-English speaker members were also excluded on the basis of potential difficulties in terms of language communication. Finally, the number of Instructables projects

posted by members was used to evaluate members' willingness to take part in the research as well as their relevance to the research project. Members who had published less than five projects were not sent invitations to participate in the interviews. The online interview questions might be very likely not irrelevant to members who had published fewer than five projects. Also, It is very likely that those members with few or single published projects in the community are not regular participants in the community. Thus, recruitment invitations for online interviewers were sent only to those members with five or more Instructables projects posted within the last six-months of their membership. So far this section has provided a description of the sampling and procedures used for site(s) selection. The next section offers more description of the planned stages for data collection.

4.5.2 Data Collection and Analysis

Data collection occurred in two phases which required two netnographic methods. At first, a participant-observational method was used to collect data mainly from projects published by members from Instructables who have agreed to take part in the online interviews. There are some other members who also agreed for their published projects to be used in the study though those members were not able to take part in online interviews mainly for time restrictions (e.g. full time employees, time difference between UK and other countries), Then, online in-depth interviews were conducted with those participants recruited from the community.

In the first phase of data collection, an archival and observational approach to netnographic enquiry was employed to collect multiple sources of online data in line with Kozinets (2010) and Healy and Beverland (2013). This phase of data collection included community conversations and a degree of researcher participation with community members and administrators of the community. A sample of popular Instructables projects was collected,

systematically archived and observed. A 'project' is a term used in the community to refer to the description of the steps required to make products (i.e. goods) by a member of the community. 'Popularity' refers to projects which generate many conversations among members. On this basis, a purposive sample of popular projects was used, in line with interest in consumer-to-consumer interactions.

Sixty-six projects documented by sixty-four members were archived, including relevant members' profiles, as well as related comments added by other members. As Healy and Beverland (2013, p.230) suggest, interpretive depth was sought by going beyond "the immediate transcription of single posts" and by analysing members' "forum history and constructing archives of their posted communications", which "helped to weigh the plausibility of informant discussion". This made it possible "to gain the same level of depth as a one-hour interview, historic text-based analysis of archival sources, or daily participation of a physical world ethnographic study (Gatson, 2011)" and also helped to recognise posts which were richer in meaning (Healy and Beverland, 2013, p.230).

Member (pseudonym)	Country	Gender	Age	Status	Education	Number of projects	Occupation/ Industry
Phineas	US	M	67 yrs	Married	4 years of college plus 4 years of seminary.	259	Lutheran pastor, now retired
Thomas	Puerto Rico	M	64 yrs	Single	3 years' university, Art major.	100	An artist.
Perry	US	F	50 yrs	Married	Two degrees: Business and Computer Science.	6	Retired

Member (pseudonym)	Country	Gender	Age	Status	Education	Number of projects	Occupation/ Industry
Noel	US	M	24 yrs	Single	BSc Electrical engineering.	6	A student.
Wyatt	US	M	29 yrs	Married	BA Architecture and 1 year of post-graduate studies at the Rural Studio.	50	Research fellow at a non-profit foundation.
James	US	M	60 yrs	Single	BA Sociology, BS Computer Science and Med. Education	69	A computer programmer/analyst retired, ESL teacher currently.
Solomon	US	M	49 yrs	Married	Some College	17	IT networking /electronics engineering.
Sloane	US	M	39 yrs	Married	Vocational training	38	A window cleaner.
Howard	US	M	37 yrs	Single	BSc Mechanical Engineering.	13	Building sensors/environmental controls.
Logan	US	F	35 yrs	Single	BSc Mechanical Engineering.	7	Mechanical engineer at a bicycle company.
Max	US	M	57 yrs	Single	Vocational training	6	Self-employed
Barrett	US	M	29 yrs	Single	Some college.	18	A graphic designer.
Bella	UK	F	30 yrs	Single	MA Industrial Design.	26	A co-founder of own company.
George	Belgium	M	19 yrs	Single	Enrolled BA Electronics	7	A student.
Douglas	US	M	64 yrs	Married	BSc and MSc Electrical Engineering.	16	An IT design engineer, retired
Lombard	Netherlands	M	65 yrs	Married	Medical, Electronics and Theology.	18	Post academic institute for 26 years, retired for two years.

Member (pseudonym)	Country	Gender	Age	Status	Education	Number of projects	Occupation/ Industry
Angus	Italy	M	37 yrs	Single	BSc Civil Engineering.	55	An Engineer.
Zane	US, India	M	39 yrs	Married	BSc Natural Resource Management and Outdoor Recreation, enrolled MSc Organizational Leadership	49	A PE teacher at an international school.
Jacob	Mexico	M	22 yrs	Single	Enrolled Mechatronic Engineering.	6	A student.
Basil	New Zealand	M	19 yrs	Single	Enrolled Mechatronics Engineering.	10	A student.
Tony	US	M	33 yrs	Single	A 2-years Electronics and Industrial Design training.	11	PCB assembly, electronics.
Spencer	Mexico	M	46 yrs	Single	Some college	26	Currently not employed.
Amos	South Africa	M	48 yrs	Married	BSc Electronic Engineering.	5	
Bryant	India	M	25 yrs	Married	MBA Human Resources	14	Self-employed.
Dennis	US	M	26 yrs	Single	Some college learning.	69	Sales position.
Jasper	US	M	22 yrs	Single	Some college learning.	7	Unemployed.
Samuel	Colombia	M	26 yrs	Married	High school.	78	A freelancer.
Otis	Netherlands	M	42 yrs	Married	Engineering.	20	Self-employed.
Penny	Italy	F	30 yrs	Single	Design.	10	Home business.

Table 1 Profiles of Participants in the Interviews from Instructables.

Richards (2005) stresses that a researcher needs to familiarise himself/herself with a qualitative data analysis package even before starting the process of data collection or becoming overwhelmed by data. He states that a good software in a qualitative research can function not only as a tool to manage data records but also as a tool to integrate all aspects of a research project from design, to reading, to field data collection, and reporting. Particularly, it is advised that large scale investigations that deal with substantial amounts of relevant data may utilise computer-assisted software such as existing Microsoft Office or specialized programs such as NVivo and Atlas.ti. So, the projects dataset was captured using NVivo and its content was saved and organised as PDF files. This process generated approximately 850 PDF pages including texts and photographs uploaded by members; grammar and style have not been edited by the researcher.

In the second stage of data collection, questions for online in-depth interviews were developed using the insights and understanding gained from the literature as well as findings from data analysis in the first stage of the project. (see interview schedule in the appendices). As progress was being made with the netnographic analysis of content during the first participant observational stage, key observations were used to provide insights into the structure of the online interview schedule.

There were many methodological challenges during data collection, both within netnographic observations as well as the online interviewing. The process was relatively extensive considering that recruitment messages were sent on an individual basis with some customization required for names, or method of contacts (e.g. private messaging, e-mails, and personal blogs). Also, response messages were written to address requests for more information from some members.

In this first round of recruitment, an initial standard message was used to recruit potential participants for the interviews. This message was kept as short as possible with brief information to stimulate members to participate in the interviews. The message provided basic information including my name, university requirement and research interests/objectives in plain language. The message also combined consent for the use of members' projects with their willingness to take part in a Skype voice interview. The recruitment invitation was concluded with a statement of potential contribution as a rewarding experience to members who might be willing to take part in the interviews. After the exclusion of those who did not meet the selection criteria (e.g. age under 18, non-English speakers, ...etc.), about 15 messages were emailed to members who met the selection and sampling criteria suggested above. This involved checking out each member profile and looking for information such as age, spoken language and number of projects.

Data analysis is often described as a consequential procedure to data collection in research. In netnographic research, however, Data analysis occurred in parallel with data collection as outlined by Kozinets (2010). Data analysis is an iterative process through ongoing comparing and contrasting similarities and differences of data elements. Therefore, the data collected from the Instructables was analysed through a hermeneutical process of interpretation (Thompson, 1997). This hermeneutical process was employed to understand the act of prosumption as experienced by members in the community. The hermeneutical framework of interpretation involves retracing back and forth among the set of data, the conversations, and the literatures including individual and collective posts. It offers the researcher the opportunity to interpret consumers' consumption experiences as they relate to their everyday lives, self-construction, and meaning they associate with their life-story (Thompson, 1997). Moreover, this interpretive framework is considered appropriate for a

deeper understanding of the experience of online prosumers because, as Thompson (1997, p.440) states, “[this framework] relevant to the phenomenological aspects of the person/culture relationship”. Therefore, it allows a netnographic researcher to explore the meanings and experiences of participants (Spiggle, 1994).

Data were initially coded by themes following a template analysis approach, which allows for the creation of a hierarchy of pre-defined codes using broad categories derived from the literature and/or data sets (King, 2005). This initial stage of coding helped to develop a deeper understanding of the community, as well as the usefulness of the data in light of the research objectives. This was followed by a second stage of coding and recoding. Similarly, photographic data with frequent and multiple inferences were analysed through induction, coding and recoding according to a pre-defined but flexible template. Photographs were then categorised as a whole as well as in sections, according to the pre-defined hierarchal coding system. In this way, photographs were regarded as data with many possible meanings (Prosser and Schwartz, 1998). They were used as evidence to illustrate the netnographic field notes, similar to the use of written quotations.

4.5.3 Research Ethics

Academic researchers whose research involves human subjects are often expected to gain approval for their projects from an institutional ethics review committee before commencing their projects. On this basis, researchers frequently refer to ethical guidelines and codes of practices to understand the ethical requirements for their projects. Such codes and guidelines of ethics are developed and published by concerned social associations. Some UK or European-based examples which are relevant to researchers in the areas of consumer behaviour and marketing include the standards and guidelines published by Market Research Society (MRS) <https://www.mrs.org.uk/standards> and the International

Code on Market and Social Research published by the European Society for Opinion and Marketing Research (ESOMAR) <http://www.esomar.org/knowledge-and-standards/codes-and-guidelines.php>. There are also other examples which would be more tailored to online research in line with the netnographic approach adopted in the present study, namely Association of Internet Researchers (AOIR). However, such published guidelines may not always address the particular needs of the researcher especially in light of the complexity of online communications. For example, Orton-Johnson (2010) provides an evaluation of the ESRC framework in online research and suggests that it promotes an over formal vision that fail to address the developing online social world.

Ensuring ethical standards is critical during the process of any research. Netnographic or virtual ethnography is no exception. Indeed, online research methods, including netnography, may sometimes raise more important ethical issues than other conventional offline methods due to the greater potentiality of covert surveillance on participants in the internet (Lindlof and Shatzer, 1998). Consistent with this view, many works have addressed the ethical dilemmas of online research. Waskul (1996) discusses the ethical implications of online research and addresses online interactions as public, but are also private. According to Waskul (1996), researchers need to make a distinction between websites as public domains and the subjective perception of privacy by the users. Waskul (1996) reminds researchers that users of the internet often perceive Cyberspace domains as private places for conversations. Indeed, such distinction between what is viewed as public or private on Cyberspace domains represents the key argument over the ethical considerations of online research.

Shoham (2004) argues that although the public discourse on computer mediated communication (CMC) can be viewed as personal, conversations of members are not

private where participants are aware that every user of the internet can read messages posted in the public domain of the internet. Also, users are very likely aware that they can participate in private online forums that are only open to members and their friends who are being granted access. Jones (1994) adds that the anonymity of virtual identities of internet users may not involve the obtaining of consents from participants while there are no risks to users. Jones (1994) also argues that abiding by the conventional ethical requirements may even harm the freedom of participants in the internet as they often choose to hide their real identities. Many others, in line with Jones (1994), have also argued that online dominos are naturally public places which do not involve consenting members (Finn and Lavitt, 1994; Salem, Bogat, and Reid, 1997; Sharf, 1997).

In addition to the above discussion, Kozinets (2002) also adds that netnography is a naturalistic and unobtrusive research method. While a netnographic researcher can ensure the privacy of participants, there is another concern such as whether participants should be made aware of themselves being researched in an ethical way. On the one hand, the consequences of informing the participants and making them aware of the research project is questioned in terms of the data validity (Webb et al., 2000). On the other hand, there are sensitive topics that require the conduction of a covert research as suggested by Langer and Beckman (2005).

Overall, a netnographic researcher needs to consider the privacy and confidentiality of participants through the collection of public data. Also, the researcher needs to gain consent from participants. As a matter of concern, the selected community for this research (Instructables) is available publicly and requires no membership or registration. This means that its online interactions can be considered public (Waskul, 1996; Shoham, 2004; Whiteman, 2012). This also means that the use of such public data for the research

purposes can be considered ethical. Nonetheless, a one to one announcement was made to the community administrators and members in line with the suggestions by Kozinets (2010) and Healy and Beverland (2013).

Furthermore, consent was also obtained through individual messages from those participants whose posts were quoted or/and their photographs were used in this research. Other textual postings from those who did not consent individually were only used as contextual in analysing data as Flicker et al. (2004) suggests. Photographs which were perceived as personal such as those which included people were purposefully excluded from the research account. By doing so, the unnecessary disclosure of personal content which is irrelevant for the purposes of the research has been avoided. It is suggested that giving participants the decision to select photographs that represent them can help to avoid some of the ethical issues in photographic representations (Pink, 2007). However, unlike the communities used for conventional ethnography, members of Instructables voluntarily included all digital photographs within the projects that have been included in the dataset thus raising fewer ethical concerns. New pseudonyms were also created in line with King (1996) who suggests that researchers should avoid using the same cyber-space pseudonyms which are used by members of online communities. Overall, this researcher's ethical position is consistent with the Whiteman's view (2012) who asserts that researcher's decision should be informed by the nature of the researched community and the expectations of its participants. Furthermore, an approval has been granted in line with academic requirements.

4.5.4 Representation and Evaluation

The findings from Instructables were evaluated throughout many phases from data collection to the saturation of data analysis and final representation. Evaluations standards

proposed by Kozinets (2010) alongside other references for qualitative research (e.g. Patton, 2002; Silverman, 2011) were used to assess the netnographic findings from Instructables. Interpretive quality was ensured through trustworthy, rigorous, credible, coherent and accurate interpretation of research data (Denzin, 1997; Healy and Beverland, 2013; Kozinets, 2010), as well as by respecting participants' views, by providing emic evidence to support etic interpretations, and by highlighting the contributions of the research to relevant theory (Pratt, 2009). Also, Kozinets (2010) addresses ten major standards to assess any netnography: coherence, rigour, literacy, groundedness, innovation, resonance, verisimilitude, reflexivity, praxis and intermix. These standards were mainly used to draw attention to the limitations as well as strengths of this procedures, findings and implications of this study. Each of these evaluation standards is discussed below alongside examples from procedures used to assess the quality of findings from Instructables.

Coherence means the absence of internal contradictions and the consistency among interpretations of data (Kozinets, 2010). This evaluative standard was applied through phases of data analysis. For example, textual data were read and re-read several times to label the most relevant texts to the objectives of the study and reduce overlap among data. In this sense, the coding process had involved iterative readings through text data in line with the suggestions by Creswell (2002): initial readings of text data, identification of text data relevant to objectives, labelling the segments of text to create categories, reduction of overlap and redundancy among the categories and creation a model incorporating most important categories. For example, several readings into the benefits of prosumption to individual prosumers have generated benefits to family, friends and people around them (i.e. local community). The iterative readings through text data generated from members' projects alongside the online interviews showed that it was more coherent to collapse

benefits to family, friends and local community categories into a single category as the socially-oriented benefits of prosumption. Such categorisation into a new label shows it is more consistent within the benefits of prosumption (e.g. personal oriented benefits as compared to social oriented benefits).

Rigour refers to the systematic collection of data in line with the research objectives and the standards of netnographic research (Kozinets., 2010). Other researchers such as Krefting (2004) refers to the same evaluation standard as 'trustworthiness' and asserts that a clear definition of the criteria used to evaluate the research may help researchers to assess their work. This evaluative standard has been applied through data collection. A sample of popular projects from Instructables was systematically collected, and observed alongside member-to-member conversations. Then, the findings from these observations were used as insights to inform the discussion guide developed for the following in-depth online interviewing with some members in the community. Rigour was not only applied through data collection but all other phases were adhered to constraints to maintain consistency within these parameters This is an example of rigorous data collection but such evaluative standard was also applied throughout other phases such as planning and entrée (e.g. a number of criteria were used to select Instructables as the community for the purpose of the present study) and research ethics (e.g. a number of criteria were used to recruit members for in-depth online interviews) as described in section 5.5.2 (data collection and analysis).

Literacy means that netnographers need to recognise textual data in line with literature and research approaches that are relevant to its questions (Kozinets, 2010). This evaluative standard was applied through data collection and analysis. Interpretations of netnographic data were informed by the literature since some pre-defined codes for data analysis were

created using broad categories derived from the literature in line with proposition by King (2005).

Groundedness means that the provision of evidence is consistent with the theoretical contributions proposed by the netnographic findings (Kozinets, 2010). On this basis, concepts developed in the findings chapters were mostly (e.g. types of prosumers proposed into assemblers, modifiers, artists and inventors basically drawing from words frequently used by members in Instructables such as assemble, modify, craft and invent respectively) assemblers from assemble derived directly from data (e.g. quotations, words used by members in Instructables) as proposed by Thompson (2004) who suggest that conclusions need to be rooted on the basis of data rather than researchers' imaginations. So, emic evidence was provided to support etic interpretations and contributions were highlighted in line with relevant theory.

Innovation refers to the extent to which netnographic findings contribute new creative ways of understanding systems or structures (e.g. in the present literature) and how these new ways may guide further research (Kozinets, 2010). Some knowledge contributed through the present netnography helps to highlight different aspects of prosumption and the role of prosumers as presented in the discussions of finding chapters five, six and seven. For example, chapter five highlights the overlapping benefits of prosumption. Such finding could aid further research by addressing empirical works within one or more of the multiple orientations for the benefits of prosumption: personal, social, market and environmental benefits.

Resonance means that netnographers need to reflect upon the personalised sense of the relationship with an online culture or community; this requires netnographers to enlighten

their readers with the concerns and lives of people who are the subjects of a study (Kozinets, 2010). Indeed, the present netnography has endeavoured to convey the personalised and emotional senses of prosumers' projects in Instructables. By doing so, the present netnography inspire readers to look at prosumption from a different perspective. For example, the reporting on prosumers' ability to make things of value for their friends and families illustrate that prosumption can "attends to the emotional life of culture members" as put by Kozinets (2010). Such portraying of emotions helps readers to recognise the narrative of a given netnography.

Verisimilitude refers to the credibility or persuasiveness of the netnographic text (e.g. the validity of netnographic exemplars by a relevant community of scholars) (Kozinets, 2010). In this sense, an attempt was made to use the most reflective and direct evidences (i.e. textual/visual excerpts from netnographic data) reported and analysed in the finding chapters. Also, informants who have participated in the online interviews were asked to give examples from their perceptions and experiences. For example, informants were asked about the usefulness of Instructables to their projects and how they benefit from their contacts in the Instructables community. This question was associated with a hypothetical example in order to help informants to think of cases where they faced difficulties in relation to one of their projects; how did other members in Instructables responded to them, and what were the outcome(s) of their projects. Therefore, informants were motivated to offer actual examples from their experiences which increase the credibility and persuasiveness of their responses.

Reflexivity refers to the extent to which netnography recognises the role of the researcher as an interpreter who is open to different interpretations (Kozinets, 2010). Reflectivity as suggested by Hibbert et al. (2010) may also refer to how a netnographer reflects on his role

in the research practice (e.g. observations, interpretations). In this sense, reflexivity as advised by King (2005) becomes essential in order to investigate human action, and to understand the interaction between researcher and the researched. Reflexivity involves authors' reflections on the nature of their environment, while considering the meaning of participants' contributions (King, 2005). Russell (2005) also adds that the researcher's autobiography such as emotions, successes, and predicaments influence the nature of data collected. On this basis, the role of the researcher in the current study has been addressed through different phases of netnographic interpretations. For example, sections of netnographic data have been read multiple times back and forth and interpretations have been accordingly re-assigned to different codes. While reflexivity help netnographers to gain knowledge of reality, Brewer (2005) remind researchers to acknowledge that true reflexivity is more consistent with the attempts of researchers to evaluate their works rather than a realistic criteria to be achieved in social research (Brewer, 2005).

Praxis means the extent to which a netnographic research help researchers to understand the role of technology as an empowerment of participants through social action and activism (Kozinets, 2010). In the current study, an attempt was made to inspire participants through helping them to evaluate and understand their personal experiences as well as their relationships with other members in Instructables. This in turn empowers participants and offers them some positive changes.

Intermix means the consideration of the diverse social manifestations in online formats of presentations such as web-pages, blogs and forums postings as well as interconnected offline presentations; this often requires a researcher to consider the use of technological tools in the representation and reporting of a netnography (Kozinets, 2010). On this basis, the experiences of members in Instructables have been both addressed within online as well

as relevant offline modes of social interaction. For example, some of the netnographic data collected includes site links, and digital photographs which were posted by members. Such online formats of presentations were used in data analysis and findings reporting from Instructables.

4.6 Summary

This chapter discusses the researcher's philosophical position in order to select the appropriate research methodology for the present study. The research's position corresponds with interpretivism as the overall philosophical approach to address the research problem in the present study specifically through a hermeneutic framework of interpretation. Consequently, the position of the researcher in this study is more consistent with scholars who reject the idea of a pure objective world. Rather, there are multiple realities in the world which can be perceived and understood differently by individual researchers.

Netnography or virtual ethnography has been selected following an interpretivist philosophical position as well as following the primary aims of the present study. Given that netnography resembles the best research method to study online cultures and online consumer behaviour, netnography is appropriate for the exploration of prosumption in Instructables, the selected online community. Moreover, the use of Instructables as a single online community is consistent with ethnographic approaches which involve the detailed exploration of a netnographic fieldwork especially given the rich of data available in the community. In order to arrive at the best potential online community for this study, the netnographic selection criteria proposed by Kozinets (2010) were used, namely relevance of data to research questions, regular communications, interactive communications between members, substantial number of participants, different types of participation and richness of descriptive data. Also, the key phases for the regulation and implementation of the

netnographic research were used: planning and entrée, data collection and analysis, ensuring ethical standards, and representation and evaluation.

A one to one announcement has been made to the community administrators and members in line with the suggestions by Kozinets (2010) and Healy and Beverland (2013). Consents were also obtained through individual messages from those participants whose posts were quoted or/and their photographs were used in this research. Data collection occurred within two stages requiring two specific netnographic methods. At first, a participant-observational method was used to collect data from Instructables. Then, online depth interviews were conducted with participants recruited from the community. Data analysis occurred in parallel with data collection as outlined by Kozinets (2010). Data analysis is an iterative process through ongoing comparing and contrasting similarities and differences of data elements. Therefore, the data collected from the Instructables was analysed through a hermeneutical process of interpretation (Thompson, 1997). This hermeneutical process was employed to understand the act of presumption as experienced by members in the community. Finally, evaluations standards proposed by Kozinets (2010) alongside other references for qualitative research (e.g. Patton, 2002; Silverman, 2011) were used to assess the netnographic findings from Instructables.

CHAPTER FIVE: THE ROLES OF PROSUMERS AND BENEFITS OF PROSUMPTION

5.1 Introduction

This chapter focuses on the individual experiences of prosumers in Instructables in order to offer a better understanding of prosumption. The experiences of members in Instructables are used to demonstrate how consumers can use an online community as a space for their prosumption as they become producers for some of the products they need for their consumption. Also, this chapter focuses on the benefits of prosumption as evidenced from behaviour of members in Instructables. On this basis, the experiences of members in Instructables are used to explore and illustrate the multiple benefits of prosumption to those who get involved as prosumers.

The chapter reports on three complementary sections. The first section demonstrates how members of Instructables can be viewed as prosumers. This section also serves as an introduction to show the significance and diversity of individual experiences of members in this online community by multiple demographic backgrounds and personal interests. The second section demonstrates that members of Instructables undertake multiple roles as they experience prosumption, which are then documented in their projects. This section reports that a prosumer undertakes the roles of both the consumer and the producer in his/her experiences. The role of the prosumer as a consumer is basically focused on the illustration of prosumers as buyers of resources (e.g. materials, components, items, parts) more than as them being buyers of final products (e.g. goods, commodities). However, the role of the prosumer as a producer is more central to prosumption in Instructables since members as discussed later become producers of multiple products (utility, functional, artistic and conceptual products). Finally, the third section focuses on the benefits of prosumption based

on observations of individual members of Instructables. This section attempts to offer a framework for understanding the multiple benefits of prosumption.

5.2 Members as Prosumers in Instructables

Members of Instructables enrich the community with a wealth of knowledge and contributions through their documented projects. Each individual is central to the community as a publisher of his own projects. Members often create personal profiles that offer an overview of their backgrounds and interests. These personal profiles serve as a connection point among members in the community and offer responses to questions such as what each member is doing in the community and why. The excerpt below is an example from a personal profile created by a sixty-six-year-old member:

"I miss the days when magazines like Popular Mechanics had all sorts of DIY projects for making and repairing just about everything... I enjoy studying the Bible and recently retired after 40 years as a Lutheran pastor. I like to dabble with some electronics projects. I have a lathe, a radial arm saw, a router, and both a 220 volt stick welder and a flux core wire feed welder" (Phineas, male, observation).

Phineas in the above quote offers an overview of his background as well as his interests as a member of the community. Phineas presents information from his personal life such as his status of employment and personal hobbies. Also, he seems interested in many activities such as making, repairing and DIY projects which are common in the practice of prosumption as discussed in the literature by some authors in marketing (e.g. Wolf and McQuitty, 2011; Xie et al., 2008). Phineas refers to happy periods of personal associations with DIY projects some time ago before becoming a member of the community. In this sense, Phineas seems one of the strongest examples of prosumers not only because of his past

experiences, but also because Phineas is a featured member who has already documented and published more than two-hundred and fifty of his individual projects in Instructables. As an experienced prosumer, Phineas reviews hardware tools and welding machines that he owns and uses for his projects, which demonstrates that his fascination with making projects is not only about gaining theoretical knowledge (e.g. from relevant magazines) but also about practising what he knows and applying his knowledge. Similar to Phineas, Donald and Walton are members who state their employment status and offer personal overviews in their profiles:

"I am retired and have been for 11 years. Love to fix bikes, golf, play pool, fish, bike ride, travel and build things. I have been married, to the same woman for 37 yrs, have three boys, and three grandchildren...Love to help people with their bike problems and am free to email any questions." (Donald, male, observation)

"I am semi-retired now as I work on taking care of my family and writing my next few novels." (Walton, male, observation)

The above excerpts from personal profiles in Instructables show these individual members have very similar backgrounds and interests. For example, the stage of life (i.e. job retirement) is a common feature for many members who participate and become prosumers in the community. Importantly, being in the retirement life stage may also reflect the extensive experiences for some individuals in Instructables. Younger members also refer to their employment status or education as they publish their personal profiles in the community:

"I work as a graphic designer, but I love to spend time tinkering with household items and electronics, mostly involving robotics." (Eldon, male, observation).

“I am a Junior EE and a software tester for Harman. I test Audi and Bentley navigation systems. Linux is my favorite OS, and I love open source technology.” (Noel, male, observation).

“I’m a Chemical and Biological Engineering student especially interested in Computational Fluid Dynamics. To balance all the theoretical work, I like to make stuff.” (Briana, female, observation).

In the above excerpts from personal profiles members Eldon, Noel and Briana refer to their current employment, which shows that they are prosumers from similar backgrounds who get involved in different projects. Eldon is a designer who is more interested in household, design and electronics-based projects, while both Noel and Briana are engineers who are more interested in technology and electronic projects. However, employment status and education may lend members credibility in Instructables. Some interviewed members also highlight their employment and education. For example, Douglas is a sixty-four-year-old member who highlights his previous experiences (i.e. education and employment) which in a sense lends him credibility:

“I have a BSc and master degrees in EE electronic engineering. I am from Silicon Valley literally. I am mainly into electronics. I was an engineer working for a company. I am an inventor. My products are around there in the market still in production making money. I have produced products integrated circuits that are in the market now for 30 years. So like one of the circuits you might have it in your house.” (Douglas, male, interview).

Douglas in the above excerpt initially states his educational background, which reflects his fascination with electronics projects similar to other members Phineas and Eldon. Douglas offers more detail about his past employment which contributes to his credibility beyond his

educational background or interests in electronics projects. He refers to extensive work experience as an engineer in Silicon Valley.

Additionally, Douglas regards his job as an ‘inventor’, rather than being just an employee or a product designer working for a manufacturing company. He also uses a few examples from his work experience to demonstrate the worthiness of the commercial products he made for his employer company. Therefore, Douglas refers to his past work experience to demonstrate his credibility as a prosumer in Instructables. However, such credibility is not only associated with members of Instructables who gained their work experience through long years of employment; it is also evident that some young members refer to their credibility through a subjective evaluation of their current education/employment achievements. For example, Jacob is a twenty-two-year-old member who refers to his education and work experience in a manner which is similar to Douglas:

“A student in the 8th semester, in one year I finish my university...studying as a mechatronic engineer. Now I’m working on an organization that makes industrial robots and equipment, making electronic circuits and mechanical systems. It is like a school but also because they have a lot of people working on developing things so they also make robots to sell.” (Jacob, male, interview).

Jacob refers to his enrolment as a current student of engineering as well as a current worker in an industrial institution. Jacob positions himself as a member of an industrial institution which offers him the opportunity to combine learning with working. Similar to Douglas, Jacob also associates himself with a prestigious organisation which hosts many developers working in saleable projects. Jacob also makes a reference to his current employer having

many successful commercial projects, which consequently demonstrates his credibility as a prosumer in Instructables.

Overall, the excerpts from online profiles shown above, alongside personal profiles collected through interviews, illustrate that members in Instructables can be viewed as prosumers. Moreover, those members often match as peer prosumers with similar backgrounds (i.e. age, education, interests and employment) and diversity of experiences. Also, members often note their past or current experiences as proof of their credibility in line with the requirements of their projects in the community. Finally, members of Instructables frequently prefer to make some of the products for their own consumption, which meets the role of the 'prosumer' as noted by several researchers (e.g. Toffler, 1989; Xie et al., 2008). The next section will focus on the roles of members in Instructables and empirically examine the extent to which prosumers can be viewed as mergers of consumption and production.

5.3 Prosumption as the Convergence of Consumption and Production

Prosumption has been theoretically understood as the convergence of consumption and production (Toffler, 1989; Ritzer and Jurgenson, 2010), but few if any empirical studies can be used to demonstrate how prosumers might combine multiple roles from consumption and production. For example, it is not uncommon in the marketing literature to address consumers as co-creators and/or co-producers of value with firms. Such involvement from co-creators and/or co-producers often requires value production from consumers. This often helps firms to achieve their commercial objectives more effectively, but does not change the position of consumers as receivers of products from producers. This means that firms continue to manage their relationships with their consumers. On this basis it is useful to note the extent to which prosumers may combine both the role of the consumer with the role of the producer in their individual projects.

The observations of members' experiences of Instructables suggest that prosumers can be distinguished from two views of consumers in marketing: the mainstream view of the consumer as an actor who expends products and values created by commercial producers (i.e. marketers, manufacturers), and the emergent view of the consumer as a co-creator/co-producer who can only produce value while working with firms. The practice of prosumption, however, comprises two roles, as observed from the experiences of members in Instructables: the consumer role of the prosumer and the producer role of the prosumer.

5.3.1 The Role of the Prosumer as a Consumer

Members in Instructables frequently take the consumer role for the purpose of their individual projects. In this sense members in the community often refer to such a consumer role as buyers of diverse commodities from the marketplace. The consumer role of the prosumer is evident in many projects in Instructables. For example, Noel refers to his role as a buyer of components for one of his projects:

“My project proved to be much more expensive than I anticipated. However, this is mostly from buying nice parts for Reginald so my project would appear as impressive as the networking technology behind it”. (Noel, male, observation).

Noel in the above example evaluates the total cost of a surveillance robot project that enables him to monitor his home via the internet. While he refers to his role as a consumer who buys some material components for the project, he justifies the buying of costly materials as in line with the expected quality of the project. This means that in their consumer role the prosumer entails financial costs as a result of consumption for different individual projects. However, Noel adds that the cost of his project can be significantly minimised through the consumption of cheaper components:

“If you were looking just to extract the internet controlling paradigm I provide, it will be much cheaper. You only need a Router...and an Arduino and Ethernet Shield”. (Noel, male, observation)

Noel offers other alternative components which can be used in his surveillance project but he seems to reflect on how the costs of his project would be perceived and evaluated by other members of Instructables. It seems that prosumers also refer to the consumer role required for a project as they usually advise other interested members in the community. Several other members, such as Howard and Tony, explicitly highlight the consumer role for different projects:

“I like to make things better so other people can make ...most people do not have a lot of money to spend and when you make so things I like to make them better of interest to other peopleso when you do that if you make something that costs like a thousand dollars like no one is going to make it right? if you make something that is really cool which cost 5 dollars then you have a lot of other people interested.” (Howard, male, interview).

“Money is always a priority. I also believe that expensive projects create a larger barrier for people who may want to make them.” (Tony, male, interview).

Howard and Tony make explicit references to the consumer role, which they mostly associate with the financial cost of a project. Given that members consume goods and/or services in their projects, both Howard and Tony believe that other members are more willing to be involved with projects that minimise the cost of this consumption. Therefore, it is important to note what and how members of Instructables consume parts for their published projects in the community. Systematic netnographic observations show that members of

Instructables take three complementary paths as consumers: consumption of new products, consumption of second-hand products, and consumption of used household products.

5.3.1.1 Consumption of New Products

New products refer to goods and services which are offered as 'brand new' by commercial producers. While mainstream consumers use new goods and services from the marketplace as final products which are ultimately consumed, prosumers often consume such products in the production of other new products. Because of this, prosumers frequently buy new commercial products such as tools and materials more than they buy final products from the marketplace. For example, some members of Instructables, such as Samuel and Angus, state that they frequently buy a variety of raw materials alongside hardware tools:

"I mostly buy stuff such as paints, thinners and wood glue. I use tools such as hand drills, grinders." (Samuel, male, interview).

"More consuming in tools and learning stuff. I'm building some very nice belts ...I need some tools and material (rivets, metal buckles...). (Angus, male, interview).

Both Samuel and Angus buy a variety of tools and materials which are iteratively consumed in many of their individual projects. This reminds us of manufacturers who often buy products as raw materials in order to sell them as finished goods. Manufacturers often buy raw materials based on their experiences with business-to-business purchasing; likewise, prosumers also buy products which they need from other buyers in order to consume them in their own projects. Samuel is very likely an experienced buyer since he frequently sources chemical materials and specialised tools for use in his individual projects. Likewise, Angus buys educational tools (e.g. books, CDs, magazines) alongside materials, which suggests that prosumers consume more than just specialised hardware tools. Such educational tools

can be used iteratively by prosumers similar to the iterative use of hardware tools. Based on the above excerpts from Samuel and Angus, it can be said that prosumers are experienced buyers who know how to find and consume the appropriate materials and tools for their projects.

Additionally, Samuel and Angus show that prosumers are not only experienced buyers, but that they also take risks associated with the consumption for their projects. Samuel's and Angus's consumption practices may entail a level of consumer risk which is likely associated with the endangerment of personal health. For example, Samuel buys chemical materials such as paints, thinners, and wood glue, which require special handling when using and disposing of them. Inadequate handling of such chemicals may compromise the personal health of the consumer. Also, Samuel buys some specialised hardware tools such as hand drills and grinders which also require appropriate handling to avoid self-injuries and accidents. Other projects on Instructables may entail the consumption of different sets of materials and tools or entail a low level of consumer risk. Nonetheless, these projects also require a buyer experience from consumers. Davida, for example, refers to one of her individual projects which shows that some projects on Instructables require a few essential materials to be sourced from the marketplace. Davida reports that she bought the required materials for a wedding dress project from a clothing shop:

"The most important thing is to find the right materials for the fabric you're working with...I went out looking for a canvas. I bought a blank off-white vintage dress at Burcu's Angels in Vancouver BC". (Davida, female, observation)

The above project by Davida may likely entail a low level of consumer risk in comparison to those projects quoted earlier from Samuel and Angus. Nevertheless, risk can be regarded

as a subjective experience which is better estimated by prosumers, relative to their individual projects. While Davida makes frequent references to the materials consumed in her project using synonym words (i.e. fabric, canvas, blank off-white), she again emphasises the same point in the description of her project. Such repeated referencing of the materials consumed in her dress project demonstrates the essence of commercial products as raw materials in prosumers' projects:

"It's essential to figure out what kind of fabric you're working with. Many formal dresses are made with a synthetic satin-weave fabric, which is what my dress was made out of" (Davida, female, observation).

Davida offers the technical specifications of the materials required in her project and the name of the shop where these materials can be bought. She shows that prosumers can take the consumer role as buyers of raw materials, rather than becoming buyers of final products from the marketplace. Davida shows that prosumers can rely on their shopping experiences to find the materials which are appropriate for their individual projects. Specifically, Davida demonstrates that a wedding dress can be made rather than bought. Similarly, other prosumers such as Lombard and Dennis make their individual projects through the consumption of some material parts from DIY shops:

"All parts of the cart you can buy at the local diy market." (Lombard, male, observation).

"I began by wiping the unit with a rotating fiber brush I got from the local DIY store. It cost around 7\$" (Kerwin, male, observation).

Some projects may require more materials from the marketplace. In comparison to the project described by Davida, Noel's project seems more demanding, in terms of the quantity

and nature of materials required. The following excerpt shows a sample by Noel which reflects an extensive list of parts required for his project:

“(1) 3/8" Precision Shaft 2.00" \$5.25 each [http://...](#) (2) 3/8" Precision Shaft 1.00" \$4.80 each [http://...](#) (3) 3/8" Ultra Precision Ball Bearings \$7.99 each [http://...](#) (2) 3/8" 0.770" Clamping Hubs \$7.99 each [http://...](#) (2) 3/8" 48 tooth Plain Bore Sprockets \$3.40 each [http://...](#) (2) 3/8" 20 tooth Plain Bore Sprockets \$1.92 each [http://...](#)” (Noel, male, observation).

Noel lists names for a number of commercial materials consumed in his project, including quantity, technical specifications, prices and location of online shops. The way these materials are presented suggest that Noel expects a level of expertise among his readers. However, prosumers may also access commercial services in addition to the consumption of material products from the marketplace. Both Floyd and Packer combine this consumption of commercial goods and services in their projects with those that are marketplace-sourced:

“materials and Tools: 1/8" acrylic: enough for your design or ~8" x 6" for mine - Access to vector drawing software and a laser cutting machine. I made this at the TechShop ([http://...](#)), which has both CorelDRAW and Epilog Lasers”. (Floyd, male, observation)

“acrylic sheet: [http://...](#)example of cost: a piece of Acrylic 12 inches x12 inches x 1/2 inches cost \$20.50 - Access to Co2 laser cutter- cant access one at a local area shop you can visit [http://...](#) to purchase acrylic and upload design to have it lasered into the acrylic”. (Packer, male, observation)

Both Floyd and Packer offer a description of the technical specifications of the material goods, alongside the potential cost of these materials and access to services. Also, they both refer to shops which offer specialised services to individuals who need access to laser cutters and cutting machines. Shops such as Techshop.ws, proposed by Floyd, provide

access to advanced machines and tools, sophisticated 2D and 3D design software, other professional equipment, and space for its members. Techshop.ws, according to its online site, provides its members access to an extensive list of facilities and related shops, including laser cutters, plastics and electronics labs, a machine shop, a wood shop, a metal working shop, a textiles department, welding stations and a waterjet cutter. The use of such facilities and advanced services is very common among members of Instructables, who often need to apply changes to materials or access to professional equipment and spaces.

5.3.1.2 Consumption of Second-Hand Products

Second-hand products refer to used goods and services which are offered commercially by non-formal traders or private individuals rather than commercial producers. Second-hand goods bought by members may include material products (e.g., an unwanted household sofa), while second-hand services may include previously purchased or activated products (e.g., a woodworking machinery service, or an active subscription to a commercial service). Members of Instructables refer to second hand products using synonyms including garage sale, junk sale and yard sale, while many of these products can be found in places such as non-regular events or non-licenced shops: e.g. clearance and antique shops, rather than standard retail.

Members of Instructables often buy second-hand goods and services to utilise them as components in their individual projects. The consumption of second hand products is mostly associated with a rationalisation of cost for many of the projects published. For example, some members, such as Kerwin, question the rationale of spending money on costly new goods or services when it is possible for an individual to access second-hand materials or services. Kerwin shows how he was able to make a table for his living room through the consumption of materials bought from a second-hand shop:

“We went to a pallet yard in the outskirts of the town where there was the possibility of choosing from hundreds of units. We eventually got an EPAL (Euro Pallet) ..., which cost us around 8\$”. (Kerwin, male, observation).

Kerwin shows that prosumers can rationalise the cost of a project through consuming cheaper materials. In this example Kerwin chooses to buy a material good (i.e. a four-way pallet unit made of wood) from a pallet yard rather than from specialised shops such as construction suppliers, which he then uses in his table project. He demonstrates that it is cost effective to substitute a commercial product with a self-made product through the consumption of material components from a second-hand retailer. Other members of Instructables explicitly rationalise the cost for some of their projects through buying second-hand products. Silas, in line with Kerwin, refers to second hand shops as suppliers of cost effective materials. Based on his consumer experiences Silas suggests that members of Instructables can find cheaper materials which may reduce the cost of their projects:

“Wax can be a lot cheaper than people think. I got about 10 pounds of wax for \$8.50! Just check out your local second-hand store or a garage sale. I went to value world for mine”. (Silas, male, observation)

Second-hand shops such as Value World and garage sales generally supply unwanted second-hand products such as old clothing, toys, accessories and electronics. Such shops also can sell rare or unusual products for bargain prices. In this context Silas seems to recommend bargain sales, which in a sense rationalise the total cost of individual projects for members in the community. Sloane also believes that prosumers can minimise the cost of their projects through the use of second-hand products left over by other consumers:

“The material is quite costly but you can still go out there with minimum material and produce humble projects you know what I mean because you already have the array of tools you already sold. You can create a lot of stuff with scraps and cut-offs that other people would throw out.” (Sloane, male, interview).

Sloane highlights the high relative cost of materials required for some prosumers' projects. On this basis he suggests that prosumers can use second-hand products rather than buy new components and materials for their Instructables. In addition to the consumption of second-hand products, Sloane emphasises that prosumers can make frequent use of hardware tools which have been previously bought from the marketplace. Thus, prosumers may not only rationalise the financial cost of a project through the consumption of second hand materials, but also rely on the frequent use of their tools as performers of services for many of their projects. This would also mean that prosumers can consume second-hand materials or tools which have previously been bought by other consumers. For example, Angus states that he frequently uses his tools and sometimes repurposes materials left over by other consumers for his projects:

“I have some tools, devices, or stuff to re-use. I buy the material I need to complete a project. In my last ible: I found two speakers on the road one night, they were left in the garbage. So I bought the new surrounds to repair them.” (Angus, male, interview).

Angus's example shows that though prosumers need to buy materials for their projects, it is sometimes possible to repurpose second-hand materials. In the above Angus shows that he was able to repair a second-hand product for one of his projects rather than buy a new commercial product. This reduces the cost for prosumers' projects. Kerwin, Sloane, Silas and Angus demonstrate a feature of many prosumers: that of looking for alternatives to

mainstream consumption. This involves identifying cheaper, second-hand and/or found materials for their projects. Rationalisation of the cost of projects on Instructables seems relevant to prosumers as consumers of components rather than final products sold in the market.

5.3.1.3 Use of Products Found in the Household

Used household products refer to goods and services which are often repurposed at no cost. These products include many of the common household commodities which have been left over or are no longer utilised by members of Instructables or their families. The use of household products is consistent with the use of second-hand products since the consumption of both reflects how prosumers may rationalise cost of their individual projects. For instance, Lamont describes a cost-effective laser cutter project through the use of unneeded household products:

“create a large format laser cutter utilizing all the scrap electronics you may have lying around. If you have a broken scanner or two, the cost can be just about 30 dollars for the entire project... I say that this costs < 50 dollars. And it does, you can even get it cheaper if you have a broken scanner.” (Lamont, male, observation).

According to a Google search, laser cutting requires the use of laser power to cut and shape materials, which is common in manufacturing applications. Also, according to an eBay search, laser cutter devices often cost around £400 to £1500, with different models and brands for household users. This shows the significance of Lamont’s project using materials commonly available in many households. Lamont offers a substitute product for a similar expensive electronic device through the consumption of unneeded materials required for his project.

Many members of the community frequently use products left over from their previous purchases. Those members turn used household materials into innovative products through the consumption of non-working or stocked products in their houses or workshops. For example, Johan introduces a new product through the use of an obsolete product:

“I had this old Apple 800K External drive laying around and it dawned on me that it was about the same size as my Lacie External USB 2.0 HDD so I thought I'd try combining the two.” (Johan, male, observation).

Johan in the above example presents a project which requires the reuse of an old product as one of the components for a new product. Computer products tend to become obsolete within a short time since new, more advanced versions are rapidly evolving in the marketplace. This often means that many consumers no longer use obsolete products, even though they may still be in good working condition. Some of those obsolete products go to waste, unused, or are thrown away. Johan introduces an innovative product which requires the consumption of materials from two different commercial brands, Apple and Lacie, with their possible variations in hardware capabilities. This combination of different products (i.e. brands) is an illustration of innovation which brings in a product beyond the technical limitations of some commercial-version products. Similar to Johan, Travis also introduces a product which requires the use of left over materials.

“trying to find something new to do with floppy disks...I was determined to do something different, so here's my take on a lampshade... floppy style!” (Travis, male, observation)

Travis uses a number of unused floppy disks as components for the purpose of an innovative design project. In doing so Travis repurposes materials for objectives other than those intended by their original manufactures. Travis turns his unused household commodities into

another useful product (i.e. a floppy lampshade). Both Johan and Travis offer interesting examples regarding the reuse of electronic components to create new products. However, the reuse of household products is not just applicable to the context of technological projects on Instructables. For example, Graham, a male graphic designer, utilises components from a broken violin (a musical instrument) and turns these components into a new product:

“What do you get if you take one broken violin? ...Well you get the Steampunk Violin Beetle...the main body is made from an old violin whose back was splitting away from the body... in a moment of inspiration I decided to make this” (Graham, male, observation)

In the above excerpt, Graham shows a pattern of consumption which is very similar to those involved in earlier projects by Johan and Travis. Graham uses components from an unused commodity to create another product. However, Graham presents more insights into the innovative consumption of material components for projects in Instructables. Travis and Jhon consume unneeded materials which eventually introduce new functional products while Graham consumes unneeded materials which eventually introduce a new artistic product. In this sense, Graham gets inspiration for his project from steampunk (a pseudo-Victorian science fiction aesthetic).

This section provides evidence of members' experiences as they find their unused commodities inspirational to their projects. Overall, it is noted that the consumption of these commodities requires members to disassemble them into components which can then be consumed for one or many of their projects. All of the above examples from members of Instructables demonstrate that individuals frequently take the consumer role as part of prosumption. As prosumers these members often buy materials, tools and services for their individual projects. This demonstrates the significance of such resources for prosumers who

consume them as components rather than final products. Prosumers often provide information relying on their shopping experiences including technical specifications of materials, prices and shopping locations. Furthermore, prosumers also take responsibility for the outcome and risks associated with their projects. Prosumers, similar to business consumers, develop new products through the consumption of materials, tools and services. Consistent with this view, the consumer role of the prosumer on Instructables emerges in two complementary patterns: cost rationalisation of market resources, and innovative reuse of individual resources.

5.3.2 The Role of the Prosumer as a Producer

In addition to the consumer role of the prosumer, prosumption (Toffler, 1989; Ritzer and Jurgenson, 2010) also entails a producer role as each individual makes use of materials and tools as resources for the purpose of developing new products. This section therefore demonstrates the producer role of the prosumer, and illustrates how individual members of Instructables can be viewed as producers of new products for their own and others' consumption.

The production dimension of prosumption is evident in members' profiles as well as their projects. Members often refer to their experiences with Instructables projects as a practice of making, creation, building and production. The following excerpts offer a sample from different members' profiles. Each member refers to himself/herself as a maker of one or more type of Instructables projects:

"I am always making new things." (Rani, male, observation).

"I spend my time making an array of projects, from electronic instruments and chessboards to cyberpunk rifles and steampunk props." (Graham, male, observation).

"I built my own home from discarded nylon fishnet and cement." (Thomas, male, observation).

The above excerpts illustrate how members have chosen to introduce themselves to the community. They also demonstrate that individual members in Instructables view themselves as producers of products through the projects they create.... Other members also view themselves as makers and repairers:

"I can fix chairs and I can fix things that do not work and stuff so generally I would describe myself as a maker." (Bella, female, Interview)

"I also try to repair them and repair my own broken devices." (George, male, Interview).

"I also fix everything by myself." (Angus, male, Interview)

All the above quotes demonstrate the producer role of prosumers, either through the projects they create from Instructables or through their ability to repair and restore existing products independently without hiring professional services. Consistent with members' views of their role as producers, they frequently publish their projects with titles which reflect the productive dimension of their experiences. For example, Bella published a project titled "Make your own touchscreen gloves". Other examples of projects' titles which reflect the productive dimension of members' experiences include "Make your scooter" by Bryant, "Make your own claude glass or black mirror" by Graham, "Build a lap top curve tracer" by Douglas, and "Make a cake stand" by Sloane.

The productive role is viewed as superior to the consumer role within the Instructables community. On one hand, the fact that many members view themselves as producers is evident in their community profiles. On the other, many of the practices in the community

are concerned with how a member can make something of use above that of the resources he or she has included from market purchases, usually in terms of the utility or quality of the produced good considered against its cost. This productive role of members in the community resonates with the call for research on what consumers do with their products rather than what they buy from the marketplace (Xie et al., 2008). Four paths have emerged for how members of Instructables take the producer role in their individual projects: production of utility products, production of functional products, production of artistic products, and production of concept products.

5.3.2.1 Production of Utility Products

Utility products here refers to projects which usually involve the integration of two or more finished products, sometimes commercial brands, into a new product. The production of utility products often does not require tasks other than those involved with the procurement of a range of finished products to be integrated into a new product. Dennis offers instructions on a project which requires the assembly of components for a pocket-sized survival kit with no tools required for the assembly. In this project, Dennis integrates a selected list of finished products which have been obtained from the market and uses them as a survival kit, including a small tin, a list of consumable commodities, a multi-tool knife and a printed plan for instructions:

“Here is the list of items you will need for your Survival kit: (1) Small multitool (1) Roll of dental floss (3) Sewing needles (1) Mini-Bic Lighter (30) Ibuprofen (14) Multivitamins (1) Tube antibiotic ointment (3) Firecrackers (9) 1.5v button cells (12) Inches of sturdy copper wire (1) White Superbright LED (10) Caffeine pills (1) Cyanide capsule (1) List of instructions” (Dennis, male, observation)

Dennis selects, combines and quantifies multiple products which can be obtained from the market as components for his new product (a pocket- sized survival kit). Dennis is passing on his knowledge of how to select and put the commodities together:

“Put everything except the multitool in an altoids tin. It will just barely close, so tape it up with duct tape to finish the job.” (Dennis, male, observation)



Figure 2 A Pocket Sized Survival Kit Project by Dennis

In addition to the textual description of his product, Dennis also provides a photographic description of his created project including the list of commodities alongside the final product. Dennis has only selected a number of relevant market-based products to be combined as

his final product with no tools or modified materials involved (see figure 2). Therefore, Dennis acts as a reviewer of market-based products which can be selected for his survival kit. Such projects require a member to offer knowledge about why and how to produce a product through finding the most suitable products or brands from the marketplace. For example, Hector similar to Dennis, has created a similar project, but he includes other commodities for a survival kit:

“You need a swiss army knife also known as a pocket knife or multi-tool....Bandages or plasters...a compass...A handkerchief...Fish hooks and line...Matches...Basically you have got a full survival kit containing all the things you need when you are in a survival situation” (Hector, male, observation).

Hector also offers a photographic description of his project including all the commodities selected for a survival kit. Hector offers a snapshot of the final product as photographed in figure 3. Hector offers more explanations of his commodities than those presented in the project created by Dennis and indeed critiques Dennis's use of container:

“Most people use altoids tins to put their survival kit in, but I wouldnt recommend to use one, as it is not fully watertight, however, you can basically use any sort of tin, box or bag you want” (Hector, male, observation).



Figure 3 All the Things for A Survival Kit Project by Hector

Hector also offers descriptive reviews of the other commodities included in his final product. The following presents his reviews, which justify the use of the commodities selected and integrated in his product:

“Obviously if your lost in say, the plain desert or the leafy rainforest, you need a compass to find your way out, a compass always points North” (Hector, male, observation)

“Bandages or plasters are the things you MUST have in a survival kit... if you cut yourself you dont want to get ill by bacteria and germs getting into the cut, so you use a bandage to wrap around it or cover it.” (Hector, male, observation)

So, Hector's project is more developed that Dennis's in giving detailed reasoning for the kinds of things one might need in different situations. Other members have also created

projects which produce utilities through the integration of multiple products from the marketplace. Diyo publishes a project about the commodities to be included in a proposed automobile emergency kit. He purposively integrates a selected range of finished products into a proposed automobile emergency survival kit, including bought commodities such as multipurpose utensils, sheltering, sanitation supplies, first aid supplies, food, and aids for survival situations. Similarly, Duncan offers instructions on a project for the assembly of components for a portable electronics kit which requires no tools to complete. For this project Duncan basically integrates a selected list of finished products which have been obtained from the market and uses them in a new electronic kit, including a bag, a list of consumables, meters and hand tools. Duncan has introduced the idea of his project, but he also acts as a reviewer of market-based products which can be selected for the portable electronics tool kit.

Such utility products are popular within bug-out bags and toolkits projects. These projects contain compact collections which can be used for a variety of purposes from touring, to camping, to survival. Indeed, there are a broad range of projects on Instructables created by members which cover many other utilities. Lon publishes a project which contains all the commodities required for a pocket fishing kit. Rad and Str include different items in different cooking kits. This often requires a member to offer knowledge about where, why and how to create a product through finding the most suitable products and brands from the marketplace. All the above projects created by Dennis, Hector and other members contribute utility products which require no tools to integrate their component products.

5.3.2.2 Production of Functional Products

Some published projects on Instructables contribute products which are based on a minor or major modification of single or multiple materials to be integrated as a single product.

Such projects combine products or parts of products as materials which are then modified and integrated to perform a specific function. Therefore, such projects contribute original functional-based products rather than utility-based products for the prosumer. For example, Otis publishes a project which is based on a minor modification of basic material in order to be used for other functions as a cable clip:

“In modern households the amount of device-related separate cables has been augmenting steadily over the years...This Instructable presents a solution for hanging those cables properly...Basic material is some flexible tubing: 2 cm (0.8 in) for one cable clip is fine.” (Otis, male, observation).

Otis produces a new product which can be used as a solution that responds to a common problem in modern households. He essentially makes a minor modification to the form of a single finished material (flexible tubing) in order to produce a new functional product, as illustrated through a photographic snapshot of the final product (see figure 4). Otis provides a description of the modification required to use tubing as a cable clip:

“Two cuts need to be made in an X-shaped fashion with a sharp knife. Using a pair of (small) scissors is also an option. After removing the material at the exterior sides, the two remaining triangular clasps constitute the fastening clip.” (Otis, male, observation).



Figure 4 A Cable Clip Project by Otis

In the above project published and photographed by Otis, a single product or finished material (the tubing) was used to accomplish the project. Basic home tools such as a knife or a pair of scissors were used to apply the required modification to create the new functional product. This demonstrates that the production of functional products by prosumers involves the use of tools as well as the modification of existing materials in order to accomplish their projects. But such projects often focus on the production of functionality inherited in the use of the products previously produced by prosumers. For example, Otis publishes another project which is presented on Instructables as an improvement of his earlier project. Otis reflects back on the use or functionality of the cable clip he presented earlier as a solution for a common problem in modern households:

“A barrier for installing the cable clip was the fact that it needed to be screwed: it appears that people sometimes are reluctant towards affecting walls and skins of closets and jambs inside their homes.” (Otis, male, observation)

Otis assesses the functionality of the product he earlier described in his project of making a cable clip for home uses. He refers to one of the potential functionality problems with the use of his cable clip., and hence suggests using an alternative functional product which can be produced for the same purpose:

By using a suction cup for making this alternative easy cable clip this barrier is being removed.” (Otis, male, observation).

“The clip is made from a standard suction cup, which is thus easily upgraded to have additional functionality.” (Otis, male, observation).

Otis offers an alternative product in his second project using materials other than those used in his first. By doing so he introduces a new version of a cable clip product through the modification of a standard consumer product (suction cup) rather than the modification of a single finished material (tubes). This makes the cable clip easier to be produced, but it also

improves the functionality of the product as illustrated by Otis in the final photographic snapshot of the project (see figure 5).



Figure 5 An Easy Cable Clip Version Project by Otis.

Some projects require major modifications of multiple materials and specialised tools in order to integrate multiple commodities into a new functional product. For example, Sloane publishes a chisel cabinet project (see figure 6) which requires the use of multiple materials as well as multiple hardware tools:

“This cabinet is made with a poplar frame, plexiglass door and some type of aluminum sided plastic panels.” (Sloane, male, observation).

“I used various tools for this project including table saw, miter saw, drill press, sanders and cordless drill” (Sloane, male, observation).



Figure 6 A Chisel Cabinet Project by Sloane

Sloane explains that he used multiple materials, which have been modified and integrated using various hardware tools, in order to make his functional product:

“Here is a chisel cabinet I made to hold a 9-piece chisel set. Made with mostly scraps or picked from dumpsters” (Sloane, male, observation).

Sloane in the above excerpt states that his product has been purposefully made to perform a specific function using mostly leftover materials. Modification of materials is central to the production of these products.: many members are more interested in modifying materials they already keep in their workshops or home garage for the purpose of their future projects. But Sloane also indicated that leftover materials were kept as potential materials for future projects:

“The wood was leftover from other projects.” (Sloane, male, observation).

Members who like to modify materials to create functional products often find scrap materials and then develop them into products at a later date. Materials become possibilities for future projects. For example, Thomas modifies a fan housing basket into the main component of a new kitchen storage product (see figure 7):

“I rescued these two fan housing halves from my neighbor's trash.” (Thomas, male, observation).



Figure 7 Fan Housing Baskets for Kitchen Storage Project by Thomas

The projects described and presented in this section require the modification of materials as a mechanism to produce functional products. Materials are often sourced from scraps kept in members' workspaces (e.g. garage, garden). The modification of materials makes available new products to prosumers who often then use them for other functional purposes. Often the found materials form the basis of a new project.

5.3.2.3 Production of Artistic Products

Some individual projects on Instructables are produced and used for their design and aesthetic qualities. Unlike functional products, art-based products often require special knowledge and skills with the processing and use of raw materials and natural resources in order to shape into a new product. For example, Sloane produces a ring through the processing of some pieces from wood:

“The hardest part is getting the sizes right...find some hardwood with nice tight grain... need to drill a hole the proper size for the finger you want to put it on...The point to this is to slide the ring on to the spindle snug enough so it grips the ring tight enough that you can turn it round and shape it. If you push the ring blank on too tight, you risk splitting the wood. If you go too loose, you risk the piece coming off...shape the ring to finished size and then sand.”
(Sloane, male, observation).

Sloane shows above that his project involves the use of appropriate materials (i.e. hardwood with good grain) in order to produce the final product (see figure 8). But he also shows that his project requires the shaping of materials into the required design. Sloane frequently refers to the proper shaping of wood materials in order to produce the final product, giving detailed instructions on how to produce the product including proper handling and shaping of the materials described and used (e.g. proper size, finished size). He also talks about how improper use and handling would damage the materials. Sloane also attaches a photographic description, which illustrates the use and shaping of materials in the project. Overall Sloane shows his knowledge of processing and correct use of the materials, and demonstrates a type of production which is based on the craft and artistic skills of the prosumer.



Figure 8 A Ring Project by Sloane

There are other projects in Instructables which demonstrate that members can use their knowledge to shape materials as parts or wholes of their final products. Similar to Sloane, Thomas demonstrates his knowledge in the use of specific materials for the purpose of crafting a new product. Thomas upload and publish a portrait project in Instructables that requires the craft and artistic skills of the prosumer. Thomas upload a set of photographs which offer a better explanation of his project and a final snapshot of portrait product (see figure 9).



Figure 9 A Portrait Project by Thomas

Thomas describes the technique he uses to shape grout (usually used in construction) into a final portrait. Similar to Sloane, Thomas shows that the production of his final product involves the sourcing of the appropriate materials for this type of artistic project.

"This is an original technique I use for making portrait busts out of grout. Grout is like cement, except it is stickier and doesn't shrink. When cement dries it shrinks and tends to crack, which the grout does not do." (Thomas, male, observation).

“The grout can be given a variety of colors...The pigments are available in hardware stores...The 2-piece mold was made out of cement...The plastic I work on is moisture barrier material” (Thomas, male, observation).

In the above descriptions of a project by Thomas, he shows that several raw materials can be used and combined after these materials can be found and purchased from the marketplace (i.e. pigments and cement). Thomas makes a reference to the originality of the technique he used for the purpose of his project. Then, he also offers an evaluation into the nature of these materials in comparison to the use of other market alternatives. He also refers to the proper handling of materials at different stages in the description of the project such as processing time of materials, drying and shrinking as potential problems of the project. This emphasise on the originality of his technique and the advantages of using certain materials in the project once again demonstrates his knowledge in using and shaping raw materials as required in the final product. Similar to the project published by Sloane, this project presented by Thomas also demonstrate the craft and artistic skills some prosumers projects in Instructables.

5.3.2.4 Production of Conceptual Products

Some published projects on Instructables contribute individual projects which are focused on the production of concept products. Such products require unconventional integration of materials. Individual members often make references to the potential of producing a new product and its practical applications. Lombard states that he is working on a project which will likely contribute a new product concept:

“I am now busy in a project that hopes to reduce the use of batteries. I want to do more with that. First I present it as a proof of concept. Now I am going to show the applications for that

proof of concept. In the proof of concept, I hope to use as less as possible materials.”
(Lombard, male, Interview).

Lombard above recognises the potential for new products and their practical applications. He refers to one of his projects which makes use of fewer materials in order to present alternatives for the use of batteries as a conventional solution for power supply in electronic devices. Lombard thinks that new product concepts can be initially presented and then proofed through showing the possible applications for the product. However, the production of product concepts on Instructables mostly refers to the practical applications of these concepts through the documented experiences of individuals in the community. For example, Joseph publishes a project which can be viewed as a production of a new concept:

“I love making proof of concept solar projects...I prefer to make solar projects that are useful in my day to day life...hates running wire 100 yards just to get three lights to turn on at night...I decided to make a high powered solar lighting system so no wires would ever need to be run to the back of the yard” (Joseph, male, observation).

Joseph makes a home-lighting system using solar energy as an alternative to the conventional solution, which requires wired mains electricity. While he produces a solar lighting system in order to overcome a household problem, the project also shows the practical use and application of solar technology. However, the production of a new product concept on Instructables sometimes involves the use of an advanced technology to prove its practical application. For example, Rani introduces a new product concept which is based on the use of an advanced technology:

“This idea to have a walker bot that shifted its front center of balance is one that I have had for a few years. However, implementing it with off the shelf parts always proved rather tricky

and prevented me from really trying. Yet, when I realized that this could be done quickly and easily with 3D printing, I was able to finally create this robot” (Rani, male, observation).

Rani above refers to the use of 3D printing technology to produce some of the functional parts (i.e. materials) required for his project. He produces some of the materials required for the project partially through the use of 3D printing technology rather than sourcing all materials from the marketplace. Rani acknowledges that the use of this 3D technology has practically enabled him to illustrate the concept of a moving robot. His project demonstrates a new product concept which is based on the use of 3D printing technology, but it is also noted that the project demonstrates the use of Arduino technology (see figure 10).



Figure 10 An Arduino 3D Voice Project by Rani

Rani's project is consistent with many of the Arduino and 3D printing projects published by other individuals on Instructables. According to the website of the company which manufactures Arduino (see <http://www.arduino.cc/>), it is a product which is created for the

use of makers and companies who want to make their products through the use of Arduino technology (Arduino, 2015). Arduino as described in the website of the manufacturing company is “a tool for making computers that can sense and control more of the physical world than your desktop computer. It's an open-source physical computing platform based on a simple microcontroller board, and a development environment for writing software for the board”. Arduino can be used by those who understand the programming language of the platform and the potential uses of its applications. 3D printing refers to a printing technology which involves the use of three-dimensional printing using special materials as demonstrated in the tutorials and projects on Instructables. Most of these products require a broad range of electronics supplies alongside a multitude of skills.

5.4 Benefits of prosumption

Members of Instructables consider prosumption a beneficial practice on a micro individual level as well as a macro social level. Many members have experienced the individual benefits of prosumption at various levels. For example, Wyatt refers to the benefit of prosumption as a practice which helps prosumers to save their financial and material resources:

“There is great value in learning to work with one’s hands. I have built almost all of my own furniture from salvaged materials in an effort to save money.” (Wyatt, male, interview).

In the above excerpt Wyatt offers an example of prosumption in which he demonstrates the potential benefit of prosumption for individuals. Wyatt explains that his maker experiences have helped him to fulfil his need for furniture. In this sense Wyatt’s prosumer activity can be viewed as an act of financial saving, but Wyatt’s prosumer activity can also be viewed as an act of saving resources through the re-use of salvaged materials. There are more

examples of prosumers who also view prosumption as useful to society: Perry refers to several examples of projects from her prosumer experiences which were useful to her family as well as the wider community:

“My experiences has had a huge impact on my family because I’ve been able to change our living space into something that suits our needs...Some of my designs have been used in community shelters for victims of domestic violence, the built in bunk beds and the loft beds especially” (Perry, female, interview)

The examples above by Wyatt and Perry demonstrate the potential benefits of prosumption for individuals as well as their wider societies. However, an analysis of individual profiles of members on IC as well as objectives of their projects shows that members share multiple benefits from prosumption. The above quotations outline the overall benefits of prosumption while these multiple benefits are discussed in the following sections.

5.4.1 Personal Benefits of Prosumption

The advantages of prosumption in functional, hedonic and cognitive benefits to prosumers are viewed as individual benefits. One or more of these benefits have been regarded central to every project documented and uploaded to Instructables. Similar to Wyatt who associates his prosumer experiences with the benefit of monetary saving by being able to build most of his own furniture from salvaged materials, other members, such as Zane and Walton, associate some of their projects with the benefit of monetary saving:

“I don’t usually hire professional plumbers, carpenters, electricians... I fix my electronics when I can... It really ends up saving lots of money” (Zane, male, Interview)

“Because we have a limited budget, no truck to transport a real hot-tub, ...I decided building my own would be the next best thing” (Walton, male, observation)

Zane and Walton both refer to how they save money for some of their projects. Zane states that he frequently relies on his DIY experiences rather than using commercial services, while Walton shows that he created his own product to avoid the potential expenses of buying a similar product. All of these examples refer to how individual prosumers can gain functional benefits such as monetary saving. However, there are other functional benefits which may not necessarily be linked to financial and material resources. Some projects can be linked to self-sufficiency. For example, Phineas used some of his make or fix projects in order to become self-sufficient through the reduction of time spent on potential commercial projects:

“I have been able to make or fix something so I could continue what I was doing without waiting for a store to open or waiting for a technician too come to fix something.” (Phineas, male, interview)

Similar to Phineas, Zane frequently prefers to make some of his own products rather than buying them from the marketplace:

“I’ve often started to buy something and then said “I can make that” and put it back.” (Zane, male, interview).

Both Phineas and Zane above show that partial self-sufficiency satisfies some of their needs, rather than relying on convenient ready-made products in the marketplace. There are other projects on Instructables which are associated with the cognitive and hedonic benefits of prosumption rather than functional benefits.

The cognitive benefits of prosumption refer to how a prosumer feels or thinks as a result of his prosumption activities. For instance, Noel views his prosumer experiences as a method of developing his personal abilities such as problem solving:

“My experiences have changed my outlook on problems. It’s no longer a factor of “I’m not smart or good enough”, I see problems as a factor of “I haven’t tried hard enough” (Noel, male, interview).

Noel refers to his improved attitude towards his own problem solving ability as an outcome of his prosumer experiences. On the one hand, he refers to his experiences of prosumption as a way to improve his personal perspectives on problems; on the other, he views problem solving as an ongoing benefit of prosumption which is concerned with the development of prosumers’ cognitive capabilities. In line with Noel, Zane shows the potential of problem solving in the individual experiences of prosumers:

“Problem solving is often where things start. I tend to collect materials so maybe the problem is just space. Maybe my space, I have to figure out what to do with all of these car seatbelts that I keep collecting or probably something more like I need a desk. I will build one. Now, how do I do that...” (Zane, male, Interview).

Zane above presents himself as a problem solver who frequently makes use of his material resources to satisfy some of his potential needs. Zane shows that problem solving is about making something useful out of unused materials or parts stocked from previous consumption. But most importantly, Zane indicates that problem solving is a cognitive benefit which requires mental efforts in order to turn smaller parts into a final product (e.g. pieces of wood into a desk).

The above examples from prosumers’ experiences have shown a variety of functional as well as cognitive benefits of prosumption. However, other individuals on IC associate their prosumer experiences with hedonic benefits more than functional or cognitive benefits. For example, Barrett, James and Amos associate making their projects with enjoyment and fun:

“Most of my projects are just toys like fun things and hobbies that are hardly for any real physical benefit beside it is just for aesthetic purpose of having fun.” (Barrett, male, Interview)

“My creations are mostly for entertainment value ...In most cases, I do not use my creation once I have made an Instructable out of it.” (James, male, Interview).

“I do not think at any point if I look at the projects seriously. I do not think there is any financial saving or any financial gaining from my projects... I just feel a lot better from a self-satisfaction point of view.” (Amos, male, Interview)

The above examples show that some prosumers complete projects purely for enjoyment. Barrett, James and Amos all refer to such hedonic benefits using terms such as fun, entertainment and satisfaction. Barrett refers to his projects as toys which is consistent with the driving purpose of entertainment value, as stated by James. Similarly, Amos refers to his prosumer projects as non-serious creations which he contrasts with those which can be produced for financial gains.

Other hedonic benefits such as self-enjoyment, as quoted above from prosumers' experiences, may include ownership, which has been found popular among individual experiences of prosumers. Self-ownership is central to individual experiences, where prosumers can feel control and a sense of proprietorship over their projects. For example, prosumers such as Scott and Dennis view a sense of ownership over their projects as central to their individual experiences:

“I Love creating stuff from scratch, even if there are a million others out there, this one's different, It's Mine” (Scott, male, observation).

"I like the process of having that sort of ownership over something that you made it yourself."

(Dennis, male, Interview)

Scott contrasts products he has made himself against products produced by others or bought in the marketplace to state his preference of self-made products. Others such as George view prosumption as more associated with functional than hedonic benefits:

"It depends if it is cheaper or not in the store to make it myself. Some of the things I want to make but I do not because they are very cheap in the market. So I prefer to buy them"

(George, male, Interview)

George associates his prosumer experience with the possibility of making cheaper products than those offered in the marketplace. This suggests that the hedonic benefits felt by some are not common across the community. This links back to the functional benefits of prosumption presented earlier such as monetary saving. George, in contrast to Scott, is keener to make products which offer functional benefits rather than a hedonic sense of ownership. This tension between functional and hedonic benefits of prosumption is likely present within some projects, though it is not a necessity. Indeed, it is consistent with individual descriptions as put by other prosumers such as Max and Howard:

"Sometimes actually making your own thing is more expensive but it is more grant fun you know for me for other people it might not be. So it all depends on the person". (Max, male, Interview).

"Most of the time when you make like often when you make something it is just you do not save money it is like making your own beer you know people that make their own beer if you ask them they save money they do not save any money it is a lot of work because buying all ingredients...so I do not know that is just me personally I would say making is more like

just forming your interest maybe... sometimes if your interest happens a coincidence something that you can save money.” (Howard, male, Interview).

Both of the narratives above refer to the hedonic benefits of prosumption. Max argues that making something would not necessarily imply cheapness of self-made products over other alternatives. Instead, he suggests that it is likely to be more expensive to make a product than to buy one from the marketplace. Howard offers a more detailed perspective by suggesting that the buying of materials is generally more expensive than buying final products. Howard associates prosumption with more expenses to those who are involved as prosumers. On this basis, Howard perceives functional benefits such as monetary saving as the exception rather than the norm among the experiences of prosumers. Thus the hedonic benefits are to some degree set in opposition to the functional benefits that some members seek to achieve.

So far the above examples from prosumers’ experiences have demonstrated the various benefits of prosumption. Also, it has been shown that different potential benefits of prosumption would be more relevant to different individuals. As presented, George experiences many functional benefits from his projects, in contrast to others Max and Howard who experience more hedonic benefits from their projects. Nevertheless, most prosumers often experience various individual benefits as exemplified below:

“This is a lot of fun and can be built for next to nothing.” (Aedan, male, observation)

“Most of them for fun, others seeking for alternatives mainly. Or for finding a different way of doing something.” (Jasper, male, interview)

Both Aedan and Jasper reflect on the multiple personal benefits of their prosumer experiences.

5.4.2 Social Benefits of Prosumption

In addition to the personal benefits of prosumption discussed above, most members' experiences combine other benefits at a social level. The social benefits of prosumption refer to the advantages which are often contributed by prosumers to the people and society around them. Overlapping with personal benefits and possibly generated from them are links to four areas which include other-oriented benefits. Such benefits encompass developing products for family and friends, contributing to their communities, and contributing to domains in the market and the environment. In accruing these benefits individual members invest their time in developing their projects and in representing them on IC. For example, Barbie refers to her prosumer experiences, which links both to a personal hedonic benefit of prosumption (i.e. self-enjoyment) as well as functional benefits that may accrue for her family:

"I'm a stay at home mum of 3 young kids and I love baking, decorating cookies, making cake pops and pretty much making any type of fun food that my kids will enjoy" (Barbie, female, observation).

Similar to Barbie, Rita describes how she is about to prepare a mushroom burger for her husband and friends using instructions from a project in Instructables:

"I'm finally going to make them! Hooray! It's my husband's d and d night tonight, so I'm hoping they'll be nerdy enough to appreciate them" (Rita, female, observation).

Here a straightforward recipe takes on greater significance for Rita. The project involved is put to use for a special occasion, to share with her husband and his friends. While once again Rita refers to the skills she is developing as an important benefit, a further gain appears to be the creation of food for others. Both Barbie and Rita show that individual

projects can offer overlapping personal and social benefits to prosumers. Many individuals on IC have referred to their projects' contributions to others which often offer functional benefits to their families and friends:

"I'm always building things for those around me. From irrigation to lighting controls, and security devices." (Solomon, male, Interview).

"My sister asked me to make a set of lamps for her market stand in the night." (Angus, male, Interview).

"I make things for other people... if I am going to give a gift to someone...more often I will make something for someone." (Max, male, Interview)

Solomon reports that he creates a variety of products which offer functional benefits to his family and friends. Likewise, Angus and Max get involved with some of their projects in order to make products for people around them. Max is particularly keen to give his productions as gifts to people in his life. This is consistent with the experiences of other prosumers, such as Perry, who has built a project apparently as a gift for a special occasion to a member of her family:

"My favorite little boy has been wanting a lego table for a while and the price of new ones has been driving me crazy... I decided to build him a lego table for his birthday." (Perry, female, observation).

Perry in the above quote shows that she had contributed functional benefits to her family (i.e. monetary saving) by being able to make an alternative product, but the most important objective is to provide something that a loved one wanted. Perry refers to gift-giving, which is a common theme among prosumers, who often make products as gifts to their families

and friends. Some other members associate their individual contributions with other benefits to IC. Instructables is viewed as a community as well as a platform to present and manage prosumers projects which may eventually contribute benefits to other members in the community. Noel offers an extensive description of individual experiences and how these experiences particularly contribute benefits to members as well as their local communities:

“The community is really an open database, there is a sole communal goal which is growth, expanding the collective knowledge of the community... any project, idea or design that is contributed to the community is a growth. For example, one incredible project is the Parabolic Solar Hot-Water Heater by the member Basil...The project boils water for free, using solar energy, and would be incredibly useful in hot areas that do not have access to clean water. The Nicaragua Solar Panel is another great example of benefitting from the community...The platforms that the community hosts act as further platforms to benefit others, the cycle continues” (Noel, male, Interview)

Noel explains the benefit of individual projects in terms of their contribution to the collective knowledge of IC. He refers to the diverse experiences of individual prosumers and the cognitive benefits of their projects in the community. But Noel also sheds light on the potential benefits of individual experiences on others who are not part of the community. Noel refers to other potential functional benefits available if members can make use of individual experiences to benefit their local communities. Noel gives examples from published individual projects in the community and how these projects can be used by members of Instructables to benefit their local communities. For example, Aedan describes the potential benefits of his project for members who want to help their communities such as teachers or instructors:

“It's also really great to show younger children and students to explain how speakers work. It would be ideal for a science class” (Aedan, male, observation).

Both Noel and Aedan associate the individual experiences of prosumers on Instructables with benefits to members in the community, but they also address other functional benefits for those members who use projects from Instructables in order to benefit their own local communities.

5.4.3 Environmental Benefits of Prosumption

Prosumers in Instructables contribute projects that serve environmental objectives (e.g. waste reduction, wildlife sustainability, conservation of resources). Prosumers' experiences contribute functional benefits through developing cheaper, better or more environmentally-sound products. For example, some prosumers, such as Sleem and Wyatt, report how their projects contribute benefits to the environment:

“I have been making fire starters for years now... The way I make them is the most economic and environmentally friendly way out there” (Sleem, male, observation).

“Almost all of my work contains recycled components, which benefits the environment. The materials come from a small geographic radius, reducing transportation energy.” (Wyatt, male, Interview)

Sleem refer to some of his prosumer experiences which enabled him to make more environmentally-friendly products. By doing so, Sleem offers benefits which improve and correspond with the requirements of the environment.

5.4.4 Market-Oriented Benefits of Prosumption

The majority of members in Instructables associate their projects with non-market based benefits. However, many members do attempt to gain some economic benefits from their prosumer activities as they see the commercial potential of their projects. For example, Packer states that if he were to win a laser cutter as a prize awarded in an Instructables competition he could develop and expand his business, and in the excerpt below he also reveals the personal importance of his work:

If I were to win the laser cutter; I would expand my business, Strange Fruit. The laser cutter would allow me to remove the middle man and reduce the cost to my customers. The laser cutter is a crucial component in the advancement and continuation of my business. The business which is the face of my inner-self. Having the laser cutter would give me the opportunity to immediately create and produce the ideas from my unconscious and conscious thought' (Packer, male, observation).

Instructables occasionally offers a platform for individual members who wish to obtain economic benefit from their prosumption activities. This appears to be accepted and positively encouraged by other members. In some cases, members will even show willingness to buy a product produced by their peers (e.g. a dress, as is the case in the quote below):

'Best I've ever seen!! Would you consider making me one [dress] or selling me yours after you use it? I would love to wear it next year! My offer is serious and I'm willing to pay for it. contact me if your would consider please' (Talia, female, observation).

Prosumers connect with the market in this way. Some members of the community are potential producers who make projects for commercial purposes and advancement in the market. Other members show their interest in selling their products to other members:

“The author of this instructable is also selling the cable clips. The webshop is accessible through http...” (Otis, male, observation).

“Due to popular demand I am actually in the process creating these to sell. It will be a few weeks as the fab shop I am having laser cut blades for me has a 1-2week lead time. If you are interested in buying one send me an email” (Eve, male, observation).

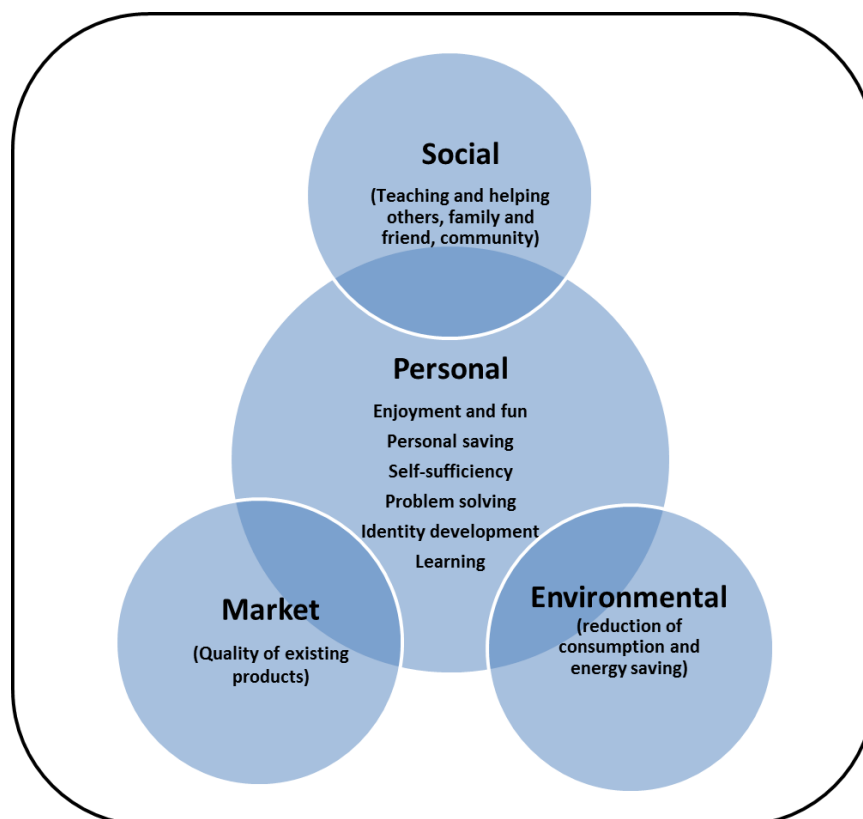


Figure 11 Benefits of Prosumption

The above multiple benefits of prosumption can be used to demonstrate the collective ethos of prosumption (Humphreys and Grayson, 2008; Ritzer, 2013). All the above examples show that there are a range of benefits for engaging with Instructables, as summarised above in figure 11. Nonetheless, the introduction of a new consumer subject (i.e. the prosumer) is central to the practice of prosumption. In contrast to findings from some researchers in marketing such as Jarett (2003) who remarks the potentiality of conflict between individual interests of consumer within groups, prosumers in Instructables are more keen to benefit their societies, environment and markets.

5.5 Summary

This chapter has focused on the individual experiences of members of Instructables in order to gain a better understanding of prosumption. The experiences of individual members as prosumers in the community were used to illustrate the practical aspects of prosumption (e.g. concept, benefits, and process of prosumption). The role of individuals is central to the community through the publication of their experiences and peer-to-peer communications.

This chapter offers empirical evidence of prosumption as a convergence of consumption and production as suggested in the literature (Toffler, 1989; Ritzer and Jurgenson, 2010). It has been demonstrated that members of Instructables combine the roles of consumers and producers in their experiences. Nonetheless, prosumers mostly prefer to take the roles of producers more than the roles of consumers: unlike mainstream consumers who buy final products to be consumed, prosumers often consume products as materials for the production of further new products: prosumers' own products. The consumer role of the prosumer occurs at Instructables as a two-sided behaviour. On the one hand, prosumers act as cost rationalisers of market-based resources (spend some amount of money on individual projects in line with their expectations of a given project). On the other hand,

prosumers act as innovative consumers of their individual resources (re-use leftover products as materials for new products). The producer role of the prosumer manifests in Instructables through the production of utility, functionality, artistic and concept products.

The Individual experiences of members in Instructables also demonstrate the multiple benefits of prosumption. Benefits from prosumption such as functional, hedonic and cognitive benefits, are viewed as personal benefits. There are also other benefits from prosumption which return in social, environmental and market benefits.

CHAPTER SIX: PROSUMERS, NON-MARKET ALTERNATIVES AND INDIVIDUAL EMPOWERMENT

6.1 Introduction

This chapter reports on three related aspects of prosumption. First, the chapter looks at the perceptions of prosumers towards firms and commercial products in the marketplace. This will help us to understand how prosumers as producers can be differentiated from other mainstream consumers. Second, the chapter reports on prosumers' connection with the marketplace. More specifically, this section focuses on analysing the extent to which prosumers in Instructables reduce their dependence on the market, and the extent to which they use their products as alternatives to market-based offerings. Finally, the last section focuses on how prosumption empowers individual prosumers in the marketplace.

6.2 Prosumers' Perception of Firms and Commercial Products in the Marketplace

Consumers often search through various market offerings which can lead to choice paralysis (e.g. Shankar et al., 2006; Markus and Schwartz., 2010). This reflects the extent to which firms penetrate consumer markets with a variety of commercial products. Arguably, many consumers may perceive markets as overloaded with convenient options. However, prosumers often refer to the constraints exerted by firms over commercial products more than the convenience of markets and offerings. Prosumers perceive the marketplace as a constrained place in which firms limit rather than facilitate prosumption. For example, some members in Instructables such as Lombard and Amos refer to how firms exert strong control over the modifiability of their products. Lombard describes the control exerted over commercial products in the electronics markets:

“The products nowadays you buy black boxes and a maker is somebody who is curious enough to open the box and to see what is in. Knowing what is within boxes he can change.

When I buy for example a mobile phone this is a box which is not meant to be opened by the consumer. All products which are derived by the electronic industry these days are black boxes.” (Lombard, male, Interview).

Lombard uses an example from the electronics industry to demonstrate how firms intentionally manage their products in a way that limits a prosumer’s ability to modify a product. Lombard describes these products as black boxes which reflect the non-transparency of firms and prevents prosumers from accessing the design and content of their products. So, Lombard implies that there is a fundamental conflict between the ways a prosumer may want to use products and supply of products by firms. On this basis, Lombard acknowledges the difficulty in modifying existing commercial products in ways which are consistent with prosumers’ expectations. On this basis, Lombard offers an extreme perception of firms’ supply and management of commercial products in the marketplace:

“You can buy a product in a black and white but all the colours in between are not deliverable. It is a kind of dictatorship of the firms who push with psychological means products in the market.” (Lombard, male, interview).

Lombard refers to commercial products as black and white which once again highlights the conflict between prosumers’ expectations and firms’ management of products. Lombard expresses a strong perception as he condemns firms’ management over commercial products. He suggests that firms enforce their products in a way which dictates buyers’ use of such products. As a result, Lombard suggests that prosumers do not make full use of products’ potentials. he expects firms to increase the modifiability of commercial products rather than limiting buyers’ access and use of products. Indeed, this suggestion by Lombard is consistent with some researchers such as Burroughs and Mick (2004) and Moreau and

Dahl (2005) who report on companies that unintentionally stimulate the creativity of consumers by constraining consumers' access to goods and services (e.g. through promotions or conditions of use/terms of purchase). Simply stated, such companies apply restrictions to the use of a product/service in ways that are consistent with companies' profitability but this in turn encourage consumers to challenge those restrictions through creative rather than defiant solutions (e.g. braking the law, consumer deception). For example, many airliners companies frequently offer promotional offers which enable consumers to book cheaper fares for a group of travellers or travel during certain periods. But many consumers often find a creative way to challenge restrictions or conditions of use by companies such as consumers who can arrange with relatives or friends to make use of an offer or an employee who is willing to negotiate his annual leave to match an offer. This does not always mean a consumer is going to pay a certain product or service high or less. But it shows that consumers are willing to negotiate with companies as a way of personal problem solving. In this sense, consumers can be understood as co-creators of value who would be willing to negotiate prices with firms and value becomes the outcome of negotiations between individual consumers and firms (Prahalad and Ramaswamy, 2004).

Another example which is very popular within the software industry is Linux as one of the best examples of open source products in the market of operating systems. Linux offers its users open access to the source code of the software which enables them to make modifications from the product original design. However, an open product such as Linux requires advanced users who are able to make modifications of the product. An analogy can be made here, as prosumers are similar to advanced users of software products in that they expect advanced access to commercial products. Modifiability of products as described in the above quote by Lombard requires advanced access and modification of commercial

products. It goes beyond personalisation or customisation of products which is increasingly observed in many consumer products. Also, modifiability of products may come at the cost of product appearance. Consumers often expect commercial products to be friendlier and easier to use. Improper use of commercial products such as modification by inexperienced consumers may lead to product damage. Therefore, it is likely that many consumers may not be willing to meddle in their products. On this basis, modifiability of products is likely to be more compatible with the expectations of prosumers than the expectations of mainstream consumers. Similar to Lombard, Amos links the concept of production in the marketplace to the control over costs which reflects control over consumers' needs:

“Sometimes the ones that are available are at very hard cost point. They are not easily modifiable you know that the commercial companies take a lot of steps to try to prevent modification of their products” (Amos, male, Interview).

Amos agrees with Lombard that firms exert strong control over their products and believes that this is done to prevent prosumers from modifying commercial products. Amos seemingly associates high cost of products for buyers with the prevention of products modifiability by firms. Thus, firms may not only make products more expensive for buyers but they also make it more difficult for prosumers such as Amos to find commercial products which meet their expectations. Indeed, this implicit suggestion by Amos is more consistent with observations in many consumer markets. For instance, an open operating system such as Linux mentioned earlier is often licenced and distributed to users in its original design for free in comparison to other paid operating systems (e.g. Microsoft Windows, Apple Mac OS X). Users of paid systems such as Microsoft Windows often need to upgrade their systems by purchasing another commercial version rather than being able to modify the original version supplied by the firm. Likewise, firms in the hardware industry frequently benefit from

limiting modifiability of their products as they encourage buyers to replace obsolete products with newer alternatives introduced in the marketplace. Thus, firms restrict modifiability of products in order to manage the potential uses of these products by consumers. Both Lombard and Amos suggest that prosumers are more interested in modifying commercial products in line with their expectations, rather than the expectation of firms. Zane also highlights prosumers' tendency to challenge constraints by firms over the management of their products:

“Makers, as a lot, tend to be warranty breakers. They open, fiddle, break, modify and rejoice at their Frankenstein monsters. Corporations are not all that fond of that type of consumer” (Zane, male, Interview).

Zane is very positive about prosumers' ability to challenge the constraints of commercial products. He uses a fictional character from popular culture, namely 'Frankenstein monsters', to emphasise prosumers' interest in manipulating products in order to produce their own products and experiences. Zane describes prosumers as warranty breakers to underline prosumers' ability to solve problems by themselves rather than being reliant on manufacturers' instructions. Zane also refers to a potential conflict between firms and prosumers who tend to disintegrate the contents and break into the insides of commercial products. Consistent with Zane and Lombard, Howard also makes an explicit comparison between prosumers and mainstream consumers which again highlight prosumers' ability to challenge constraints on commercial products:

“The mainstream consumer does not care, is not interested in how stuff work for them it is like magic you know so a maker is more interested in the product and how it works like and

then how to make it and how to turn it even better you know how to make adjustment to the product.” (Howard, male, interview).

Howard in the above quote distinguishes prosumers from mainstream consumers by their qualification to modify products in line with their expectations. In contrast to mainstream consumers who often focus on using products as final commodities, Howard thinks that prosumers are more interested in exploring the potentials of final products. Howard refers to the limitation of the consumer as a buyer who is neither interested nor qualified to understand the insides of commercial products. This means that prosumption enables prosumers to challenge the concept of commercial products. Implicit to his view, Howard shows that prosumers are not limited as buyers of mainstream products. Rather, prosumers can improve, replicate, make, and even provide better products than those they buy from the marketplace.

All the above examples by members in Instructables refer to prosumers' perceptions of existing manufactured goods and the companies that make them. Prosumers connect with the marketplace as buyers of commercial products. Nonetheless, they may have to overcome firms' management of commercial products in order to prosume. Some suppliers may offer customisable versions of their products for different uses. Nevertheless, prosumers often apply major modifications to commercial products in ways that exceed the uses of a product customiser. On the one hand, prosumers prefer to produce their products using their own materials as demonstrated in chapter five. On the other hand, prosumers perceive commercial products as resources that should be made open to modification that corresponds with prosumers' objectives, equal to or more than the expectations set out by manufacturers. Prosumers offer a fundamental view on the product concept that extends

beyond mainstream consumption. The next section explores the extent to which prosumers from a practical sense can reduce their market dependence.

6.3 Prosumers and the Reduction of Market Dependence

This section builds on the insights gained from prosumers' perceptions of firms and commercial products alongside other findings from chapter five. The section addresses how members in Instructables connect with the market. Prosumers often attempt to reduce their dependence rather than evade the dominance of the market. Spencer believes that prosumers need to become producers for some of their products rather than seek full independence from the marketplace:

"I am not against manufacturing you know in china and cheap stuff in general. Overall it is probably a benefit to the world. It is a little overdone right now. But I do not think people should just stop buying things from other people and start making everything themselves. I think sometimes there is no advantage to it." (Spencer, male, interview).

Spencer suggests that full independence from commercial production is neither possible nor desirable. He believes mass production of consumer goods such as Chinese imports and cheap products yield benefits to global consumers. Therefore, Spencer refers to the dominance of cheap products in many of today's consumer markets in the world. On this basis, he highlights a potential problem of over-production which makes consumers over-dependent on commercial producers. Spencer thinks that people need to reduce their dependence on the market, but he stresses that it is not always desirable or beneficial for people to produce rather than buy the products they consume.

Spencer's approach to being a prosumer is about reducing rather than replacing people's dependence on the market. But this begs questions about how prosumers engage with the

market and the extent to which prosumers are willing to reduce their dependence on the market. Many members in Instructables voice their concerns with the excessive dependence upon the market by many of today's mainstream consumers. Some of those members associate such excessive dependence upon the market with negative environmental or societal consequences. For example, Nell explicitly refers to the destructive side of overdependence upon the market in terms of the environmental consequences:

"I wish many more people would repair things that can be repaired, but because it is easier to throw away things and buy new ones, specially with so many chinese disposable things they make, humans are contaminating the Planet in such way that we are destroying everything...We all should be more conscious and responsible by repairing whatever can be repaired. Perhaps many would say they will die before that time comes, but..... what about the future generations? what are we leaving to them? PLEASE, think about it!" (Nell, female, observation).

Nell is strongly committed to the view that people should repair things which can be repaired rather than purchasing new replacements from the marketplace regardless of the nature of the product. Nell brings to the fore that consumers often find shopping an easier alternative to repairing things. She uses strong language to condemn some of those consumers who seemingly rely heavily on the market. On the one hand, Nell seems to understand why consumers prefer to buy new products rather than repair goods, especially in the context of disposable products. Nell believes that many consumers can repair their possessions, but often prefer to buy new ones because of the low cost and convenience of buying cheaper market alternatives such as Chinese products. On the other hand, Nell also refers to how those consumers are often dominated by a short term consciousness or selfishness which ignores the long-term consequences on future generations.

Nell above suggests that repairing products is not a decision about whether or not people can find affordable alternatives in the marketplace. Rather, it is in the first place about the cumulative consequences of human behaviour on the long-term, and how repair of products can play a role in waste reduction, sustainable consumption, conservation of scarce resources and minimising environmental impact overall. From her perspective, people who repair things engage in conscious and responsible consumer behaviour. Nell offers a vision of the world and the behaviour of a universal consumer., Nell encourages members in Instructables to raise their awareness and think of their avoidable buying for the common good of current and future generations. Similar to Nell, Basil is a young member who also encourages the reduction of market dependence:

“If we all became a little more independent rather than relying on the industry then we may all be better off... for example my wind turbine I made it set up on my property...if we could all have wind turbines, we would be saving the environment and money for everyone.” (Basil, male, Interview).

Basil acknowledges that it is neither possible nor desirable for people to evade the dominance of the market. Rather, he encourages people to reduce their dependence on the market. Inspired by one of his renewable energy projects, Basil refers to prosumers like him who can produce and use such renewable energy products. He uses the example of wind turbines to demonstrate how prosumers would be able to reduce their dependence on commercial suppliers in the electric power industry. Basil, similar to Nell, acknowledges the importance of raising people's awareness of the environment. However, Basil highlights the positive use of environmental resources (e.g. use of wind power) rather than the negative abuse of environmental resources (e.g. excessive consumption of material resources).

Luther is another member who agrees with Nell. Luther believes that people can repair things without the need to buy new replacements from the marketplace. Luther speaks from his work experience and expresses concerns with consumers throwing away things and becoming over dependent on the market. However, Luther address such overdependence on the market in terms of societal consequences in younger generations:

“You CAN fix, modify or improve something by yourself, and that you DON'T need to go buy it new! As a former Public HS science Dept. employee I can tell you this - probably two thirds of the kids in school today can't even light a match, and think that a two- week old cell phone is an ancient relic! Hand them a box of matches to light a Bunsen burner and they whine - "Where's my cigarette lighter?" as they tentatively strike the match and wince! This site proves that there are still plenty of the under-30 crowd who "get it", and who could probably survive on their own, were TEOTWAWKI ever to arrive.” (Luther, male, observation).

Luther believes that people’s ability to make and repair their things is a matter of self-reliance and coping with change. Luther offers interesting examples from the context of science classes in high school education. In a sense, Luther implies that people willingness to make or repair their things is stimulated during their early years of education. But Luther assumes that most students in high school grow more dependent on the market while they hold false perceptions of obsolescence and newness of products. Luther also gives an example from scientific or chemistry classes in schools where most students find it difficult to light a Bunsen burner using matches and choose lighters as more convenient alternatives to use. The use of a Bunsen burner may seem an extreme example, but the point here is about students’ lack of ability to be self-reliant and lack of capacity to learn how to make, modify or improve

something (i.e. prosumption). If students are not competent to use their abilities to deal with simple tasks, it would more difficult to become less dependent on the market.

Luther considers young members of Instructables, aged less than 30 years old, as good models for self-reliance and coping with change. His use of the term 'TEOTWAWKI' implies these meanings. This term is often used as an abbreviation of the sentence 'the end of the world as we know it' which is popular in online blog sites about survival strategies, emergency-preparedness, self-reliance and self-sufficiency. According to different online blogs, the term 'TEOTWAWKI' can be applied not only in the context of life threatening events but also in the context of daily life events which require people to rethink their lifestyles.

Other Instructables members also share a level of enthusiasm with the opinions expressed by Nell, Basil and Luther. However, those members often use shorter explicit sentences to express their preference for repairs over buying new commodities from the marketplace. For example, Pad states that 'It's fantastic to see people giving a fix a go, before buying a new one'. Pad's statement is consistent with the observation that many Instructables in the community arise from simple to complex repair projects. Phineas also states that 'learning how something works often allows you to refurbish something someone else is sending to the junk'. Indeed, there is an extensive use of scrap materials within various projects. On the one hand, this illuminates the community's determination to reduce waste. On the other hand, this demonstrates self-reliance as members produce things of value out of reclaimed materials, rather than relying on pre-packaged products in the market.

Overall, the quotes presented above reflect the views of members towards the reduction of dependence on mainstream consumption and the market. Nonetheless, there are projects

in the community which require the use or integration of commercial components from the marketplace. And prosumers frequently assess commercial products in order to evaluate their subjective ability as producers of their own alternative products. In other words, prosumers tend to evaluate their subjective abilities (i.e. or qualification) as producers of alternatives for their consumption in comparison to other options available commercially. Observations of prosumers' products suggest two approaches to production based on prosumers' experiences: production as a complementary alternative to market offerings, and production as a competitive alternative to market offerings.

6.3.1 Production as a complementary alternative to market offerings

Some prosumers view their ability to produce products as a complementary alternative to buying commercial products from the marketplace. In other words, those prosumers commonly situate their ability to make products as an alternative that provides them with more choices than are available commercially. Consequently, such prosumers perceive themselves as partial creators of some of their products while they buy many other products from the marketplace. For example, the following excerpt reveals prosumers as creators of products within a constrained marketplace:

"I bought a laptop rather than making my own. I bought a cell phone smart phone rather than make my own. I bought an apple computer rather than making my own but I love making things if I can" (Max, male, Interview)

"I'll buy products from market. Sometimes it's not possible to make your own stuff because it's too complicated like making a car or Laptop" (Bryant, male, Interview)

"I like to make things but I am not qualified or able to build many things I need, a computer for example" (Wyatt, male, interview).

In the above quotes, each prosumer acknowledges himself as a buyer of commercial products while recognising the primacy of making things oneself. Those prosumers generally refer to the constraints in the marketplace especially in the electronic industry while they recognise their limitations as creators of alternatives to market offerings. This may reflect prosumers' interest to increase their choices in the marketplace. Bryant and Wyatt use examples such as cars, computers, and electronic devices to refer to the complexity of some commercial products as a general constraint on presumption. Others refer to the cost of production as a potential constraint on some individual projects. For example, Amos demonstrates that some individual projects often generate costs beyond the individual use of the prosumer:

"A typical console for example like a TV multi-media console runs me probably 250 dollars working materials. And that is just raw materials. The problem is that you are not buying materials in bulk. Chinese manufacturers could give things thousands of these per a day. So they got economies of scale working for them." (Amos, male, Interview).

Amos compares his capacities as an individual prosumer with those available to firms. He shows that buying materials for an individual project sometimes involve higher costs and labour than buying a commercial product from the marketplace. Consequently, he shows that firms can capitalise on their capacities as mass producers with economies of scale. Amos also refers to Chinese manufacturers who are often associated with competition capacities over costs in many consumer markets. Overall, Amos shows that individual prosumers are often constrained by the feasibility of the alternatives they can create in comparison to market offerings created by competitive suppliers. Similar to Amos, Penny refer to the factor of cost as a potential constraint on prosumer projects. However, Penny

offers an example, from the furniture industry, that suggests making her products as an equal possibility to buying market offerings.

“I do purchase more lumber and building material so it’s an equal trade off though. What I don’t spend in buying furniture, I’ve spent in buying material and tools.” (Penny, female, Interview).

Penny shows that buying materials and tools for her individual projects often replace buying final products from the marketplace. Nonetheless, she seems to underestimate other factors such as time and labour. Consistent with Penny, Wyatt views his ability to create his product as a potential alternative to a commercial product:

“Looking at Ikea’s offerings, I came across the Brimnes bed and realized hey, I could make that!” (Wyatt, male, observation).

Wyatt compares an existing product from the marketplace to a potential product in order to evaluate his ability as a creator of a similar product. Overall, all above examples show that members situate their ability in line with their production as a limitation in the marketplace. Phineas refers to one of his Instructables projects but he acknowledges the limitation available in his product:

“I wanted a precision angle finder. I finally decided to make my own...my angle finder does not have magnetic bases like the commercial version does.” (Phineas, male, observation).

Phineas highlights an important feature that is available in a commercial product which does not exist in a similar self-made alternative. While Phineas may not need to include such a feature in his product, this implies that he can use his product as a complementary alternative to other equal or better products available commercially. Arthur is also another

prosumer who decides to make a product as an alternative to a similar commercial version available from a shop:

“My kid is going to be 2 years now. I thought of buying some building blocks for him. So Surfed the kids store for the same. They were asking for the sky for just a hand full of the blocks. I thought, why not make some just by using hard paper...So I pulled out all my tricks ...and made what you are going to see in subsequent pages.” (Arthur, male, observation).

Arthur initially shops around for a commercial product which serves an educational purpose for a member of his family. He finds the product he was looking for, but he thinks the market price of the product is unjustified . He decides to make a product repurposing some materials available to him rather than purchasing a commercial version from the marketplace. This shows that Arthur was able to produce a complementary product which meets his objectives without the need to use equivalent or better alternatives available commercially. there are other members such as Sloane who offers a description of a high involving project to produce a maintenance service in his household:

“I recently moved into a rental house. it was completely re-done including the counter-top... the problem, is that the counter top was done so terribly that after a month of normal use it was bubbling at the corner seam pulling from the wall not completely caulked all the way.... So with the landlords dime, I requested to re-do this lousy job. He accepted and this is the process....If you were to go buy that "Generic" countertop to replace it, it would cost the same as what I paid for all my materials.” (Sloane, male, observation).

Sloane decides to fix a problem in his household rather than using possible services from professional providers. Rather than asking his landlord, Sloane, however, requests to do the maintenance job himself but describes the required work as a lousy job. Nevertheless, it

appears that Sloane believes he can do the repair job himself rather than asking for professional help. Evidently, Sloane also calculates the cost of materials required for the repair job which match the cost of replacing the counter-top with a new one. He may be able to save if the labour work is considered as a financial rather than a time cost. But most noteworthy Sloane prefers to do the repair job which eventually results in the production of a complementary service as an alternative to equivalent or better professional services.

According to the above examples from members' experiences in Instructables, some prosumers situate their ability to make products as an alternative that provides them with more choices than are available commercially. But those prosumers generally acknowledge their individual limitations as producers of their products in comparison to commercial producers (i.e. firms). Prosumers' project experiences in Instructables show the perceived constraints enforced by firms or the non-feasibility of the alternatives they can produce in comparison to market offerings. Some of the Instructables projects tend to demand similar or even higher costs than commercial alternatives. In this case, prosumers associate their projects with the production of complementary rather than product alternatives for their own consumption. This means that prosumers are often able to produce alternatives but they often acknowledge that commercial suppliers would be able to provide better products.

6.3.2 Production as a competitive alternative to market offerings

Prosumption is addressed by some prosumers as a competitive alternative to buying commercial products. Such prosumers often reflect on their high expectations from offerings in the marketplace. Unlike members who focus on production limitations (e.g., 'I am not qualified to produce alternatives like commercial products'), other members focus on production potential (e.g., 'I am qualified to make better alternatives than commercial products'). Those members who focus on the production potential often express their ability

as producers of competitive alternatives to those offered by commercial suppliers. For example, Samuel is a prosumer who refers to the low quality of commercial products in the furniture industry and implicitly reflects on his ability as a producer of better alternatives:

“You know the industry makes you products that fail or brake within a year... You could find furniture in the market so cheap but it is something that you cannot give to your kids when they are grown up.” (Samuel, male, interview).

Samuel reflects on his dissatisfaction with the non-durability (i.e. low quality) of many of the furniture products available commercially. he suggests that many producers in the furniture market prefer to make cheap rather than durable products. Commodities in the furniture market often reflect a category of products which require high involvement buyers' decisions. This means that consumers often consider the cost of buying a piece of furniture and spend a considerable time to make consumption decisions. It can be argued that self-production of a furniture item may likely cost more time commitment or more expenses from buyers. For Samuel, a buying decision may also consider the advantage of using durable furniture products which can be given to family members. Wyatt also highlights a number of potential problems with products available commercially and reflects on his ability as a producer of better alternatives:

“Ugly, poorly-designed, non-durable, expensive products don't deserve my dollars or my use...I don't need to spend my limited financial resources on cheap crap imported from overseas.” (Wyatt, male, interview).

Wyatt also refer to his dissatisfaction with commercial products in terms of potential problems including poor appearance, poor design and financial cost. He also thinks that many commercial producers tend to produce cheap low quality products which meet their

commercial objectives. He even suggests that local producers often import their commodities from cheaper consumer markets which result in the supply of low quality overpriced products. So, Wyatt expresses an extreme reflection on the buying of many mainstream consumer products available commercially. He believes that the buying of many imported items is a waste of buyers' financial resources and suggests a preference for producing better alternatives to many of those products available commercially.

Both Samuel and Wyatt highlight different problems with some mainstream consumer products (i.e. mainly quality in relative to cost of products) and implicitly refer to prosumption as a potential solution to such problems. Self-made products often involve purchasing materials or using left materials from previous consumption which will not necessarily be cheaper or equivalent to commercial options. However, both Samuel and Wyatt prefer to make their own products in a way which meets their quality expectations. Other prosumers also refer to their ability as producers of better products which compete with products supplied by commercial producers. For example, Penny refers to some examples from her experiences and states that she had produced several products which are better than similar commercial products:

"Some items I can make better than what is available in the marketplace. I have a friend that bought a set of bunk beds for her kids at the same time I built the first loft bed. The loft bed is still standing, the bunk beds fell apart. Some items, just aren't available. For example, the dress I created for my senior cat. I simply cannot find anything to fit her in the stores, so I had to make my own. These are items that you simply cannot find in the market place."
(Penny, female, Interview)

Penny highlights two aspects of prosumers' goods in comparison to commercial items. Firstly they are more durable and secondly she can make them to measure.

In the second example, Penny also suggests that a prosumer can sometimes make products which are not available in the marketplace. On this basis, Penny situates prosumption as a necessity to provide better or competitive alternatives to market offerings which are either low quality or not available commercially. James also compares products that he created with commercial products in the marketplace:

"My bicycle watch mirror is also commercially available but mine is cheaper and better. My bicycle packs are much cheaper than commercial ones. My slinky machine, and mechanical newton's cradle, and recording box are not available commercially." (James, male, Interview)

James in line with Penny refers to quality and unavailability of commercial products as potentials for the creation of competitive alternatives by prosumers. He is also able to create products that are cheaper than commercial ones. Other prosumers have also referred to their ability to create bespoke rather than mass products:

"I can make them specifically suited to what I need exactly the way I need." (Sloane, male, Interview).

"I began to make my own thing... I end up noticing that a product that you make by your own, fills the necessity that you have completely" (Jacob, male, Interview)

Sloane and Jacob refer to their ability as creators of alternatives which match their individual needs better than products they may buy from the marketplace. In questioning the need for

indoor plumbing, Raza raises issues of use and exchange value (Vargo and Lusch, 2004), and assumptions of the marketplace in terms of what is functionally required:

'Who needs indoor plumbing when for less than \$300 you can have a perfectly good outdoor crapper' (Raza, male, observation).

While for most prosumers the use value of indoor comfort might be essential, the production of an alternative to the marketplace norm appears important to Raza. The questioning of what the marketplace offers is a frequent preamble to the presentation of projects, which resonates with the literature on consumer tribes (Cova et al., 2007). Here Kerwin makes a direct comparison to the commercial version of a table highlighting its price and interestingly does so using the language of marketplace communications while emphasising the help he will give to other members through describing his project:

'Frustrated at the £249 price tag of the Legion Pallet Table offered by Made.com and think you can do an equally decent job yourself? Enthusiastic to start your own project but don't know what you'll be facing? I hope this instructable will give you an opinion on the scope of the work to make your own pallet coffee table' (Kerwin, male, observation).

Also, changes in the marketplace can actually enable Instructables members to create their products. Maddox was only able to build his brain wave interface because of the recent availability of appropriate low cost parts; thus actually extracting additional value from the marketplace and enabling the development of a new project. Such a practice imbues marketplace products (i.e. the 'parts') with new meanings and use value (Holt, 1995; Cova et al., 2007; Cova and Cova, 2012):

'Recently we can get parts, micro controller more low cost, small size and more easy to do custom programing. So I made 3 different prototype first. then make actual low cost interface' (Maddox, male, observation).

Generally, prosumers tend to evaluate commercial products from different perspectives such as quality, and cost. Prosumers also tend to compare the products they make to those which are available in the marketplace. In some cases, however, products are not available or suitable to meet the requirements of prosumers. Therefore, some prosumers often take the opportunity to produce competitive alternatives to commercial products.

6.4 Non-market alternatives and individual prosumer empowerment

It has been shown that prosumers produce complementary and competitive products which in turn reduce their dependence on commercial producers. Prosumers' ability to produce their alternatives points out to the empowering potential of prosumption. Therefore, this section examines prosumption as an empowering practice and focuses on the ways by which prosumers feel empowered in the marketplace at an individual level. Rooted in their perception of commercial products, many prosumers often combine market-based materials (i.e. parts, components) to produce their products while many others apply major or minor modifications to final commercial products to produce their own products. As a result, the production of these new alternatives empowers prosumers through giving them control which is more consistent with their individual expectations, rather than the expectations of commercial producers (i.e. manufacturers, marketers). Many prosumers associate the expansion of their consumption choices with more control in the marketplace. For example, Max and Wyatt state that they have more choices as producers of non-market alternatives than those available to mainstream consumers:

“I have more choices since I have in addition to buying things I have the option of making things”. (Max, male, Interview).

“I make while others merely buy”. (Wyatt, male, Interview).

Max and Wyatt suggest that a prosumer's ability to produce products for self-consumption expands their choices beyond purchasing final products from the marketplace. An expansion of consumer choices in the literature of marketing is associated with consumer control which in turn leads to consumer empowerment (e.g. Wathieu et al., 2002). Nonetheless, consumer empowerment often refers to commercial producers delegating control to their consumers. This implies that consumer empowerment is more reflective of the expectations of commercial producers than the expectations of consumers., firms dictate and design the set of choices which are eventually offered for consumer selection. For example, a pizza shop may offer its customers a set of choices (e.g. pizza deals, items per order) to customise their orders. This may delegate a level of control to customers since they make their selections and preferences from a set of choices which were designed by a commercial firm. But firms often design their products to meet the expectations of groups of consumers rather than the individual expectations of consumers.

Additionally, some researchers in marketing also suggest that delegating control to customers is disciplinary rather than empowering (e.g. Zwick et al., 2008). This means that consumers are disciplined by being able to customise/personalise their orders in such a way that matches the objectives of commercial firms. Thus, the above references from the marketing literature offer insights into prosumers' experiences and individual empowerment of members in Instructables. Several members in the community such as Wyatt and Selena

refer to how the production of non-market alternatives expands their choices which in turn give them control that match their individual expectations:

“I am constrained only by my own ingenuity, not a false set of choices constructed by corporations.” (Wyatt, male, interview).

“I’m not stuck in a store looking at something someone else wants me to buy.” (Penny, female, observation).

“The more you make, the more choice and control you can exert over your own life.” (Selena, female, observation).

Wyatt, Penny and Selena explicitly equate a prosumer’s ability to become a producer for some of his or her products to a degree of individual control in the marketplace. Wyatt and Penny view commercial products as choices which sometimes constrain rather than empower consumers. Wyatt and Penny offer a strong assessment of commercial products as selections which are not always consistent with consumers’ expectations, but they do not reject all commercial products or involvement with commercial producers. Rather, they emphasise the conflict of expectations between consumers and producers.

The data shown here indicates that prosumers empower themselves through exerting control over choices beyond those intended by commercial firms. Selena equates a prosumer’s ability to produce products as an expansion of choices which consequently reflects a degree of control in line with her life expectations. She makes an explicit relationship between prosumers’ alternatives and individual control. Selena suggests a positive relationship between someone’s ability to produce non-market alternatives and individual control over their life projects. Thus, Selena implicitly show that the production of prosumers’ alternatives empowers them in the marketplace. Indeed, there is explicit

evidence that some members in Instructables feel empowered by being able to make alternative products which meet their individual expectations. For example, Penny and Logan explicitly express their feeling of empowerment as individual control over the design and features of their products:

“I do feel empowered. I have control over the design and the end product.” (Penny, female, Interview).

“I have control over the final product I can get exactly the colour I want I can get exactly the shape that I want I can have it to match some outfits or clothings that I have.” (Logan, female, Interview).

“I get what I need with the features I need” (Phineas, male, observation).

Penny describes her feeling of individual empowerment as a designer for some of her products. She implies that empowerment is associated with individuals' ability to exert control over their products. Likewise, Logan and Phineas describe their ability as prosumers who can make products that match their individual requirements. Logan refers to several descriptive features of products such as colour, shape, and size. Phineas also refers to such features and reports on his individual control by being able to produce products with features that match his expectations. Consumers often look out for features of commercial products before they make their buying decisions. On this basis, some commercial producers offer their customers the ability to customise their products. There is suggestion in the business literature that consumers feel empowered as they become able to customise their products (Fuchs et al., 2008). Both Logan and Phineas show that they can produce non-market alternatives for their own consumption which eventually result in a sense of individual prosumer empowerment.

Prosumers feel empowered not only through control of their product features but also through their ability to introduce items not available commercially.

“I can make them specifically suited to what I need exactly the way I need...I can create an end product that is truly unique to the market.” (Sloane, male, interview).

“Empowerment opens up new horizons... products that never were (e.g. Led lamps) will spring up.” (Bryant, male, interview).

consumer empowerment has been associated with consumers' ability to practise more choices which give them control over the products they buy from the marketplace (Denegri-Knott, 2006). Such individual control is also consistent with prosumers who can expand their choices through production of non-market alternatives. Those prosumers often refer to empowerment to describe prosumers' ability to make alternatives rather than buying products available commercially. Therefore, presumption rather than consumption is more consistent with empowerment since presumption as demonstrated in the above examples expand prosumers' choices from merely buying market offerings to making prosumer's choices. Hence, prosumer empowerment in the marketplace reflects prosumers' ability to produce alternatives to commercial products supplied by firms.

6.5 Summary

Prosumers connect with the marketplace as buyers of commercial products. Nonetheless, they tend to overcome firms' management of such products. Prosumers offer a fundamental view on the product concept that extends beyond the utilitarian use of mainstream consumers. On this basis, Prosumption more than consumption is consistent with empowerment as presumption expands prosumers' choices from merely buying market offerings to making the prosumer's choices.

Prosumer power in the marketplace reflects prosumers' ability to create alternatives to commercial products supplied by firms. Prosumers use prosumption as a complementary as well as a competitive alternative to market offerings. Based on this concept of prosumer power, some prosumers describe individual empowerment in association with the outcome of their activities while others associate empowerment to an ongoing process. The former group of prosumers focus on the empowering nature of producing their own products and exercising control in the marketplace. The latter group of prosumers, however, focus on empowerment as a process of ongoing personal development as producer-consumers, rather than as the outcome of prosumption itself.

CHAPTER SEVEN: PROSUMERS, SHARING AND COLLECTIVE EMPOWERMENT

7.1 Introduction

This chapter addresses prosumers as sharers in the marketplace. The chapter focuses on collective/peer-to-peer aspects of prosumption. The chapter reports on three main interrelated areas. The first section addresses collective prosumer empowerment in the marketplace. The second section Finally, the third section explores the relationship between sharing and collective empowerment, and how sharing magnifies prosumer knowledge and empowers prosumers.

7.2 The Interactive Practice of Prosumption

Instructables host collaboration among members with the purpose of sharing instructions and explanations in a variety of technology, household, gardening, workshop, food and recreation projects. Most members follow the site's guidelines and post project tutorials following a 'step-by-step' format including photos, videos, animations and other illustration methods as enabled by the community's website and reflecting the site's collaborative nature. While the documentation and publication of projects in Instructables mainly occur individually (member-to-community), such projects also involve community-to-member interactions. Consequently, this section describes this interactive process of prosumption between individual prosumers and other members in the community.

Prosumption on Instructables is largely an interactive process both in terms of passing on information, and the reflections for improvement from the project producer and those who comment on their projects. A member completes a project (i.e., produces the goods or services) before the project is shared with the community (i.e., published on the community site). While the completion of a project is concerned with how a member delivers and uses

his project(s), the publication of a project is focused on the selective explanation of a project to other members in the community.

Instructables projects may take a short or long time to complete depending on their complexity. Projects may require extensive levels of physical activity such as moving large items to a workshop or using household tools to reshape materials. Instructables members often write evaluations to other members in the community about elements of involvement such as time, cost, effort and skills (Xie et al., 2008), highlighting the nature of the process:

“This Instructable will introduce Reginald as a whole and then go into a breakdown of every component in detail. Performing all the necessary networking to accomplish this can be very complex and involved, however this method of communication is clarified and explored through this Instructable. I saturated approximately a solid month of research and troubleshooting into a simple guide” (Noel, male, observation).

“The entire costume took over 2 solid months to make. I’m still recovering” (Ramona, female, observation).

“This was an ultra-simple project, and relatively inexpensive” (Davida, female, observation).

Individual prosumers perceive their involvement with projects as a process which requires planning and management of resources. They reflect on their experiences in ways that ensure others recognise the degree of difficulty involved. Members often prepare lists of materials and tools required to complete a project, in addition to detailed descriptions of their experiences to set out expectations about the level of complexity of a particular project.

Similarly, photographic description is a major component of Instructables projects. Photographs are not only illustrations of Instructables projects, but also intrinsic parts of

prosumers' publishing experiences, records of the process of prosumption and learning aides aimed at helping others in the community. All projects of Instructables include prosumer-generated photographs (Michaelidou et al., 2013). Most members use photographs that focus on the functional aspects of their projects (e.g., how to use tools to display required materials). For example, in a sequence of photographs Otis shows the tools, materials and steps required to make a simple clip from tubing (see figure 4), which he concludes by showing a photo of the final product in use.

The photographic documentation of projects can be interpreted as an important part of the collaborative production process in terms of the value it passes on to others. Photographs uploaded by members can help others in the community to understand projects, set out expectations and possibly create similar projects. The physical effort of some projects is matched by the mental requirements of others:

"Before we can build Simple Bots, it is important to have a rudimentary understanding of how electricity works (or does not)... In the Simple Bots eBook, all of the electricity for bots will be coming from batteries. So, I will only be explaining DC (direct current) electricity in this Instructable". (Rani, male, observation).

Members refer to knowledge sources such as tutorials and e-books, and how these sources were used to understand and make projects; prosumption in such cases is not an easy process but one requiring time, competence and mental effort (Xie et al., 2008). This would appear to be part of the learning value chain required for such collaborative production with Instructables members frequently sharing online sources and providing information on other specialised sites for their projects:

“For those of you who are new to the concept of a bug out bag please check out this link <http://...>” (Duncan, male, observation).

“Here is the best site for it <http://...> and it has videos to show you how to do it too” (Don, male, observation).

The above quotes refer to how individual members often provide detailed description of their projects alongside the processes required to complete a certain project. Nevertheless, the process of prosumption continues on as prosumers publish their projects and interact with other members in the community. Such interactivity is supported by members’ evaluations and reviews:

“There are two types of supporters. 1- admirers and commenters that boost one's morale and encourage to make more projects. 2. Experts that can provide problem solving and suggestions about designs. Both are important” (Bryant, male, interview).

Comments include propositions for further project development, and suggestions about which alternative materials to use. The following suggestions are made to a project, which outline how to build a speaker from scratch:

“This is a very clever design and I have to say, I'm very impressed A few recommendations which may improve the quality of the speaker: Try using finer, insulated wire. This does admittedly defeat the purpose of scrounging materials, but it can be bought online relatively cheaply... Try securing the magnet directly within the coil. The field will be strongest within the coil, which will provide a greater impulse to the magnet” (Jerome, male, observation).

“I like the idea of the speaker. I would like to make a suggestion. 1) I think you need to used enamel covered wire or any wire that has an insulation. 2) why not try placing the coil on the

inside of the cup. When the coil energizes, it should move the cone better” (David, male, observation).

In his recommendations David recognises the dilemma of using waste materials versus the technical advantage that may accrue from buying from the marketplace. But members are using the market to better develop their collective prosumption and such purchases could not be said to enable company-to-consumer production in Humphreys and Grayson’s (2008) sense.

Members continually instruct others in the community on how to make items, but also share their own knowledge resources and those of others. This represents an element of prosumption occurring across the community, with knowledge and skills adding value to products and members alike.

7.3 Productive sharing

A first glimpse in the Instructables site may suggest that the community is largely individualistic with a focus on the experiences of individuals more than the members as sharers of knowledge in the community. Each member can be viewed as a documenter of his or her individual projects. For example, George states that he occasionally refers to his history of projects for individual purposes:

“I mean sometimes after a year for example I am not sure how I made something so I can go back to my Instructables and look back at the description and see how I built it. I can also look and see if I need to change or edit something from my older projects. It is simply like a log book.” (George, male, Interview).

George describes his collection of published projects in Instructables as a log book which can be used occasionally for self-reference such as reviewing and improving his older

projects. It is interesting that the prosumer can enhance his experiences through looking back at individual projects which may eventually generate newer versions of projects. This may suggest that projects can be published in the community as personal instructions rather than instructions to be shared with other members. However, sharing is unavoidably rooted in the idea of being a member of Instructables. George, for example, has also referred to how other members in the community have used his projects:

“There are a lot of people who have used my Instructables to create their Instructables.”
(George, male, Interview).

Similar to George, Phineas also sees the collective benefit of sharing projects on Instructables. However, he does not see himself as part of a collective movement as such:

“I see Instructables as a place to document personal projects for my own benefit and the benefit of any who can appreciate them. I do not see myself as part of any movement or cause involving other members of Instructables.” (Phineas, male, Interview).

Phineas seems to emphasise the individualistic use of his publications as personal projects while denying being committed to other members in the community. But Phineas acknowledges that his projects might relate to other members in Instructables who appreciate them. Therefore, Phineas and George are not rejecting the principle of sharing, but they seem less committed to sharing in line with the common objective of the community. Additionally, many prosumers document their projects as chronological archives in their personal blogs in addition to Instructables. For example, Zane refers to how publishes his projects in his own personal site before publishing his projects Instructables:

“I used to publish my projects on my own site. But I found that the traffic wasn't that great...I have had much greater visibility by publishing projects in Instructables.” (Zane, male, Interview).

Zane demonstrates that publishing his projects in Instructables has generated more visibility for his projects than publishing them in his personal blog. Zane shows that publishing in Instructables has helped him to share his projects with the members in the community. In line with Zane, Steve also demonstrates that he often publishes his projects In Instructables to share with a larger community:

“I try to choose the best outlet for a project for the audience it's intended for, and would often post to my blog. But it's easy to see the volume of traffic sites like Instructables. So it just makes sense to use the opportunity to share” (Steve, male, observation)

Steve also refers to how he chooses to publish his projects for different audiences. Steve may imply that sharing in Instructables is not only about accessing a larger community but it is also about sharing projects with peers or a community of prosumers. Personal blogs are often focused on the presentation of a prosumer's works more than sharing with others. On the one hand, a personal blog might be used as a log book of a prosumer's projects in a similar way to the example presented by George earlier. On the other hand, a personal blog may involve sharing projects with a general audience who are not necessarily interested in prosumption. However, Zane and Steve demonstrate the importance of sharing in Instructables as a way to increase the visibility of individual projects. Thus, sharing seems essential to publishing projects in Instructables regardless of prosumer's individual commitments. Unlike George and Phineas, many other members demonstrate that they are committed as sharers in the community:

"I wanted a platform to share my work." (Wyatt, male, Interview).

"I wanted to share my experiences and solutions with others." (James, male, Interview).

"I wanted to share the stuff I'm building." (Solomon, male, Interview).

"I reflected upon why I was making Instructables and realized the value in sharing my ideas with others." (Wylie, male, observation)

Each one of the members above views himself as a sharer of knowledge in the community. They all refer to their objectives as sharers of their works, experiences, projects, and ideas with other members in the community. The above quotes only represent a sample of individual members who view themselves as sharers while there are many other members who acknowledge the community as a platform for knowledge sharing:

"If you want to make the vast majority of Instructables are people who just want to share their knowledge and so this is a great platform for them to do that so these are people who are just really generous with their knowledge which I think is a great community." (Logan, female, Interview).

"You know they have all of this really powerful know-how stuff which you know people were sharing it is really good stuff there." (Douglas, male, Interview)

"The new maker as we know from Instructables is looking now for communities where he can share his work and findings. The maker scene should care about makers." (Lombard, male, Interview).

The above excerpts illustrate that members share a common understanding of the importance and purpose of Instructables as a platform for sharing knowledge between

prosumers. Most importantly, those members seem to emphasise the productive power of sharing in Instructables. They all refer to Instructables as a community which manages the works of individuals into collective prosumer knowledge. Logan describes members as generous sharers of knowledge which may reflect the richness and value of the community. Douglas also acknowledges the community as a place for powerful prosumer projects. Lombard makes a reference to the genuine interest of prosumers to share their works and findings with each other. Overall, sharing in Instructables magnifies the experiences of individual experiences into a collective community of prosumers. Members share their individual projects in Instructables to connect with other peer prosumers and to enhance their prosumer knowledge.

Many members in Instructables are naturally self-driven by their willingness to become prosumers for some of their products and sharers of their projects in Instructables. This is evidenced in the above excerpts by some members such as Logan who believes that most participants in Instructables are generous contributors of knowledge or Lombard who believes that participants are searchers for communities that sponsor them. Nonetheless, some data from the community suggest that prosumer behaviour in Instructables is also incentivised by admins or other peer members in the community. There are two forms of incentivisation that support productive sharing in Instructables: incentivisation through gamification and incentivisation through rewarding.

7.3.1 Incentivisation through gamification

Participants in Instructables are able to access and track their activity in the community through a dashboard that includes many online and statistical tools such as counting of views, counting of favouring and counting of followers. Such tools enable members to check out the number of views, number of favouring for any of their published projects as well as

the number of peers who can receive instant updates about future added projects. In addition to online forums hosted in the community, each member in Instructables is also able to view comments through his profile page. Such use of these design tools and interactive comments in Instructables appear to be similar to those applications used in games or what comes to be known as 'gamification': "the use of game design elements in non-game contexts" (Deterding et al. 2011, p.9).

Gamification is becoming popular in many social networking and media sites (e.g. Youtube, Facebook) as well as many models of mobile applications (e.g. WhatsApp, Instagram). Gamification is growing increasingly as a way to encourage user's engagement in social and media sites (Easley and Ghosh, 2013). In this sense, there are evidences from Instructables which demonstrate that some of the productive sharing behaviour in the community is incentivised through such technique of gamification. For example, some members who participated in the interviews such as Thomas and Graham have about more than one thousand peer followers. Also, some of the projects published by those members have been viewed and favoured by other members thousands of times. Furthermore, it is very common that some projects receive comments and suggestions more than others. Overall, this illustrates that some sharing that takes place in Instructables is in part incentivised or desired by the administrators or members in the community.

7.3.2 Incentivisation Through rewards

Some members of Instructables are rewarded for the number of projects they have published in the community through adding them to a list of featured members. For example, there are some members such as Phineas, Tony, Graham and Samuel who are recognised as featured members in Instructables. So, this illustrates that a participant can gain a digital status and attract more followers to his profile and peer interests in his projects. On this

basis, status can be viewed as a rewarding tool that also encourage participation in Instructables. This is consistent with Lampel and Bhalla (2007) who highlight the role of status seeking in online communities. Lampel and Bhalla (2007) argues that such status seeking in terms of constructing a 'digital status' and advocating a 'celebrity status' is likely becoming popular to sustain online communities.

In line with the argument by Lampel and Bhalla (2007), participation in contests as a form of incentivisation is also popular in Instructables through rewarding winners. Encouraging members to participate as prosumers can be viewed as a sustaining tool for online communities. In some cases, such contests can also function as a motivational tool to encourage new members to join the community. For example, Zane refer to his registration in the first place as a member through one of the Instructables rewarded contests:

"I don't recall how I stumbled onto Instructables. But it was the lure of a free t-shirt for projects posted ...if I recall correctly." (Zane, male, observation).

Similar to Zane, Graham participates in a contest in the community that involve the use of left items from old computers. Graham wins the contest as one of the first three winners of the competition out of a hundred other peer participants. Therefore, such contests in Instructables which are frequently sponsored by business companies and large brands such as Home Depot, Radio Shack and Tekton Tools illustrate how prosumption is in part incentivized and desired to sustain the community. Overall, incentivisation works as a technique to encourage productive sharing among peer participants in the community since both forms of gamification and rewarding are governed by a clear set of criteria for adding new site features to the community, sponsoring business contests, and selecting and judging participants.

7.4 Teaching, Learning and Sharing Relationships

Sharing in Instructables is primarily organised as a relationship between individual members and the community as a collection of prosumers. On the one hand, each individual member represents a building block in the community as a publisher of his individual projects. On the other hand, members of the community, in return, will respond with ideas, questions, evaluations, constructive criticism, and suggestions for improvement. For example, Thomas is a male member who has made a significant contribution of 104 projects in the community. He published about 17 pages with about a 100 illustrative photographs on a single project out of his group of projects. In return, he received about 82 diverse comments from many members in the community. Additionally, 64 members have favoured his project. Each member also has a list of followers including those who are interested in keeping updated about his projects. Thomas, for example, has 739 members following him to receive updates when Thomas publish and post new projects in the community. Thomas is only used here as a micro single example to demonstrate the sharing relationship between individual members and the community.

Consistent with the above citation from Thomas, he describes his role as a sharer of knowledge in Instructables as a teacher who passes on his lessons to other members in the community:

“Being a member helps me to take care of the teaching side... It is a convenient way to share.” (Thomas, male, Interview).

Thomas as an individual member equates himself to a teacher or a mentor who passes on his knowledge within a particular project to the community. Similar to Thomas, Lombard also equates his role in Instructables to teaching:

“I am publishing now for the last five years my projects... It is more teaching. So there is also a part of the instructor which is to tell people what they can do themselves.” (Lombard, male, Interview)

Lombard compares his publication of individual projects to an instructor who teaches members in the community. Consequently, both Thomas and Lombard refer to the role of individual members in Instructables as teachers who share their documented projects with the community. In line with Thomas and Lombard, Max reflects on how members in the community learn from individual projects:

“People show what works well with them. Many projects on Instructables people are really really wanting to help others learn what they have presented on the Instructables projects.” (Max, male, Interview).

Max demonstrates the relationship between individual members who assume the role of teacher and other members who learn from them., he shows that individual prosumers largely assume the role to teach others through the documentation and presentation of their individual experiences. Indeed, members frequently reflect on how they learn from documented projects in the community. Both Jacob and Joseph refer to learning as an outcome of their involvement with individual projects:

“Like 5 years ago I check all the projects in Instructables. I mean all. I check since the first Instructables to the last and I learn a lot.” (Jacob, male, Interview).

“Luckily I ran across some well written projects on Instructables which helped learn some of the basics.” (Joseph, male, observation).

Jacob reports on his extensive learning throughout published and individual projects. Joseph also reports on his learning experiences in Instructables. He focuses on individual projects as a source for learning but he also underlines the importance of projects' clarity which links back to teaching. He shows that members often refer to clear projects as sources for learning. However, members as publishers of their individual projects also learn from those who run across their projects. For example, Thomas and Lombard, in addition to their role of teaching, refer to *how they learn from members in the community*:

"I am learning through contact as I share what I do." (Thomas, male, Interview).

"Instructables gave the ability to publish within a community of makers. The main interest was this feedback." (Lombard, male, Interview).

Thomas shows that he also learns from members in addition to his role of teacher. He implies that a member publishes his projects with the expectation that other members will respond with feedback that enhances his learning. Similar to Thomas, Lombard refers to his interest in the feedback on projects that he publishes in the community.

The data shows that sharing in Instructables is largely managed as a relationship between an individual member and other members in the community. An individual member becomes a focal facilitator of interaction with learners through his documented projects. An individual member largely assumes the role of a teacher using his documented project as a platform for teaching and engaging other members in the community, while learning occurs as a collective relationship between the member and other members who are interested in his projects.

7.4.1 Peer-to-peer teaching through inspiration

Teaching is highly demanding which often requires the teacher to become the focal facilitator of interaction with learners as demonstrated in the previous section. Consistent with this, some members such as Jessica offers a rich description on the role of individual teaching in Instructables:

“Explain, explain, explain! Don’t assume your audience will always be familiar with what you’re documenting. Use lots of image notes, use the macro setting on you camera, and take a ton of pictures. Approach it the same way you would if you were teaching someone in person and give them all the details. I think that helps encourage them to do the project themselves.” (Jessica, female, observation)

Jessica stimulates other members to provide rich descriptions and effective visual demonstrations of their projects. Jessica makes frequent references to explanation which is fundamental to the role of teachers. In her view, teaching other members in Instructables requires a level of explanation which should be dependent on the likely level of beginners rather than the level of experienced members. Most importantly, Jessica implies a link between the role of teaching and inspiring other members in the community. Lisa also reflects on teaching as the inspiration of members in the community:

“I always liked to explain things, and one of the most important skills for a teacher is being able to transmit his enthusiasm to the others.” (Lisa, female, observation).

Lisa also refers to explanation as a fundamental aspect of teaching. Similar to Jessica, Lisa views inspiration as central to a member’s role as a teacher of his projects. Thus, she suggests a successful method of teaching requires a member to encourage those who learn

from his projects. Tony also demonstrates that he offers simplified instructions of his projects to encourage other members in the community to become makers:

“By giving easy to follow instructions I hope to take things that seem difficult and present them in a non-intimidating way, thus encouraging more people to learn how to make things themselves.” (Tony, male, Interview).

Tony suggests that members are often reluctant to move from gaining knowledge to doing projects. This is often a reflection of a member's capacity to do a certain project. Therefore, Tony advocates teaching in terms of demonstrations that enable members to attempt difficult projects. Jessica, Lisa and Tony all offer a rich description on the role of members as individual teachers of their projects. They all refer to the importance of clarity, sufficiency, and rich explanations on individual projects. This is consistent with many observations of published projects where members use many types of visual illustrations such as photographs, tables, and software diagrams. Most importantly, Jessica, Lisa and Tony associate individual teaching to the inspiration of other members in the community to attempt published projects. Consistent with their views, Jessica, Lisa and Tony suggest that a teaching role in Instructables is not only about passing knowledge on to other members but also about inspiring members to move forward from gaining knowledge to doing projects. In a sense, members are expected to use the knowledge they learn from the community to produce their own projects. This reflects on the community as a place to inspire and generate prosumers' projects in addition to the accumulation of prosumer knowledge.

7.4.2 Collective learning through inspiration

Learning mainly occurs at the point of interaction between an individual member and those who are interested in his or her project. Members often perceive learning as an interactive

relationship with members. For example, Homer encourages members to engage as active learners with members in addition to their role as teachers of their projects:

“If people are interested enough in your project to ask a question about it then take the time to write them a response...You can learn a lot about how to improve your projects from that interaction...you can discover a lot by trying to work with those people to come up with alternate solutions.” (Homer, male, observation).

Homer in the above quote implies that member experiences are widened through learning with other members. The interest of members stimulates sessions of questioning and responses which eventually produce collective learning. It is evident that many members often acknowledge that they were inspired as learners from published projects. For example, Sloane demonstrates that he gets inspired from interactions with members over published projects:

I am always looking at others people's items and using that for inspiration if I have questions I ask them and people would clarify it better in the comments. ...a lot of my ideas come from other Instructables (Sloane, male, Interview)

Sloane shows that he often interacts with other members as a learner from projects published in the community. He clarifies that other members respond to his questions which eventually inspire him to create his own projects. Thus, this example by Sloane demonstrates that learners use the knowledge they gain from the community to build other projects. This shows how members learn together and inspire each other through ideas and projects. Consistent with Sloane, Angus also acknowledges that some of his projects are inspired by other published Instructables:

“I discovered that some of my projects were inspired on other instructables projects, which I saw many years ago.” (Angus, male, Interview)

Angus evidently shows that he has built some of his projects using projects from other members in the community. Both Sloane and Angus highlight the importance of inspiration as an interactive relationship among learners. Most importantly, they illustrate that members frequently use the knowledge to contribute other projects in the community. Consistent with inspiration, some members such as Amber feel committed to give back to the community:

I learned a lot from people who are openly sharing documentation for the things they've made. There's no way that I could be working at the level I am today without these people. I wanted to start contributing my own content back into this community. (Amber, female, observation)

Amber shows that she learns from projects published by members in the community. But she also views herself inspired to giving back other projects. Amber underlines the importance of knowledge she obtains from members' projects on her works. Teaching and learning occurs as an inspirational relationship. Members manage their experiences as sharers who inspire each other through a cycle of individualised teaching and collective learning in the community.

7.5 Sharing and collective prosumer empowerment

Earlier in this chapter, it was suggested that sharing enhances prosumer knowledge through the combining of individual experiences in the community to.... In addition to individual empowerment as demonstrated earlier in section 7.5, members also recognise the collective potential of empowerment in Instructables. For example, Lombard refers to the empowered individual as a basis for collective empowerment in Instructables:

“I feel empowered by being a maker. If I am not empowered on a personal level, then I cannot do anything to empower the community.” (Lombard, male, Interview).

Lombard perceives the empowered prosumer as a foundation to empowerment at a collective level in Instructables. He views the empowered prosumer a source for collective empowerment. Max perceives collective empowerment as an outcome of empowered individuals:

“It is very empowering to know that we can do these things that we did not know we can do. And a community makes that much easier...it is empowerment for everybody.” (Max, male, Interview)

Max refers to the role of Instructables as a community which empower prosumers at the individual as well as the collective level. He associates collective empowerment with collective knowledge. Max refers to Instructables as a place to facilitate sharing that eventually expand prosumers knowledge. In addition, Max interprets expansion of the prosumer knowledge as a step from sharing and knowing to doing projects. Noel views his individual contributions as a source for growing knowledge in the community:

“I feel as though sharing ideas and designs to the community contributes a small amount to the collective knowledge we have. I like to think that my ideas may be some of the building blocks to construct future ideas, and future projects.” (Noel, male, Interview)

Noel refers to how he shares his projects in Instructables as minor contributions to the collective knowledge in the community. Nonetheless, he sees these contributions as potential foundations for other future projects. Based on this, Noel shares with the hope that some of his projects might be used to develop potential projects by other members in the community. However, observations of members' experiences demonstrate two different

ways in which members empower each other in the community: validation and reproduction of projects.

7.5.1 Validation of prosumer experiences and empowerment

Each project in Instructables can be evaluated and validated by other members. In turn, a member obtains new knowledge through evaluation and validation of his individual projects. Bella refers to how members can empower each other through the validation of subjective experiences of prosumers:

“If you create things in isolation then it is almost nobody sees them so therefore do you have validation? Do you feel empowered to do it again? Which I think why things like Instructables are really brilliant because you create something you can validate by sharing it with thousands of people.” (Bella, female, Interview).

Bella emphasises the power of sharing in Instructables as a validation of prosumers' subjective experiences. On the one hand, Bella highlights the prosumers' need to share and make sense of his individual experiences with other prosumers. On the other hand, Bella seems to describe prosumption as a repetitive behaviour. Bella suggests a relationship between communal sharing and empowerment. Consequently, she demonstrates that prosumers experience empowerment as validations of each other's projects. Consistent with validation of prosumers' experiences, there is evidence that members often reflect on their feeling of empowerment as sharers with other members in Instructables. For example, Tony in the following quote provides an example of how a member validates his subjective experiences within the community:

“Before I started sharing my creations I saw them as little more than a distraction, but after I began to post them online I quickly learned that many people found them interesting and I had actually learned something from them.” (Tony, male, Interview).

Tony provides a self-evaluation of his subjective experiences as a prosumer. He recognises that sharing his projects with other peer prosumers has allowed him to reflect on his experiences. Tony demonstrates that the feedback and comments he has been receiving from peer prosumers has empowered him to appreciate his projects and learn from peoples’ reactions to them. Lisa also implies that other prosumers have helped her to validate her experiences and give back new projects in the community:

“I always thought that what I know is not much and what I did was not very good but thanks to this website I realized that I can still share my ideas and be able to teach something to somebody.” (Lisa, female, Observation).

Lisa similar to Tony provides a subjective evaluation of her projects and conveys a sense of empowerment. But Lisa seems to think that validation of her experiences improves over time where members become more willing to share their experiences. Members in Instructables reflect on their empowerment as collective validation of individual experiences. Most importantly, collective empowerment turns into prosumer confidence and ongoing sharing.

7.5.2 Reproduction of prosumer experiences and empowerment

It is common among Instructables members to share and use each other’s experiences as a departure point to produce new prosumption experiences. Members empower each other through using each other’s experiences as sources of inspiration for their projects. A member may use someone’s project as a benchmark to reproduce a potential opportunity

into another project. Angus describes how members empower each other through the potential use and exchange of ideas:

“Everybody is coming up with ideas that basically empower each other. So basically everybody is empowering each other. We are discovering new ways to do things and that gave us more ideas.” (Angus, male, Interview)

Angus refers to ideas exchange in Instructables as a source of collective empowerment. He suggests that prosumers empower each other through the discovery of new ways to accomplish projects. Similar to Angus, Douglas refers to the empowering potential exchange and use of individual projects:

“I was doing something. He saw what I was doing. He said well I have a use of that in a different area. So he basically saw what I saw. I saw an opportunity. And He saw that the opportunity would be even more powerful for what he was doing it and using it on” (Douglas, male, Interview)

Douglas refers to how a member often publishes a project in the community that is then developed by another member. Both members share a parallel understanding on the essence of a project. The experience of the predecessor is referenced and credited. But the referenced experience is consequently shifted up and developed into usages other than those intended by the original prosumer. Consistent with the above, some members such as Noel gives credit to projects that have helped them to create their own projects:

“I really couldn’t have constructed many of my projects without the contributions that others have made. A specific example was Teslaling’s ServDuino tutorial, about how to set up the Arduino for network communication. This served as a platform in understanding the

capabilities of the Arduino, and how one can setup a basic network with it. Using this platform, building Reginald became easier” (Noel, male, interview)

“Everybody else just wants to copy because that feeling of empowerment and creation when you make something often like say there are maybe 10% of people who can come up with their own ideas that makes something interesting and then 90% of people who need a bit of help getting started. So then they copy the sort of ideas of the 10% of people and some of them they just copy it and then they feel satisfied. Other people copy and then innovate on top.” (Spencer, male, interview).

Both Noel and Spencer views the contributions from other members as essential to the creation of thier projects. While Noel is essentially building on a project published by another member, ‘Teslaling’, Noel acknowledges the predecessor as the source for his project. Noel refers to Arduino which is an open source electronics that is extremely open to modifications and usages by prosumers in different areas. Arduino involves very flexible prototyping which is based on both software and hardware. The flexibility of the product makes it popular among members who share reproduced experiences. Spencer offers a richer description of the reproduction of members’ experiences in Instructables. He refers to different groups of prosumers and believes that the majority among them are those who are reproducer of others’ ideas (i.e. projects) rather inventing ideas for their projects.

7.6 Summary

Sharing in Instructables enhances and manages the experiences of individual experiences into a collective community of prosumers. On the one hand, members share their individual projects to enhance their prosumer knowledge. On the other hand, members manage their experiences as sharers who get inspired by each other through a cycle of individualised

teaching and collective learning in the community. In addition to individual empowerment, members of the community also recognise prosumer empowerment at the collective level. Members empower each other as validators as well as reproducers of experiences.

CHAPTER EIGHT: A REFINED UNDERSTANDING OF PROSUMPTION, AND PROSUMER EMPOWERMENT

8.1 Introduction

This chapter offers a discussion of main findings of this thesis alongside existing literature on prosumption, discursive power and prosumer empowerment in marketing and consumer research. The chapter is divided into four sections. The first section synthesises main findings on the roles of prosumers and benefits of prosumption in Instructables in order to offer a refined understanding of prosumption and its manifestations in marketing. The section argues that the producer role rather than the consumer role is central to distinguish prosumption from consumption and other closely related practices (i.e. consumer co-creation) and offer those who are involved as prosumers a variety of personal and communal benefits.

The second section synthesises main findings on prosumers use of resources in Instructables in order to develop a theory of prosumption, in online communities, as a combination of an individual integration of resources alongside a co-prosumption of collective value. This section aims to propose a typology of prosumers in online communities based on the integration of individual resources and co-prosumption of collective value in Instructables.

The third section discusses the relationship between prosumption and similar practises in marketing (mainly consumer co-creation) with a view to understand the various roles of consumers as prosumers of resources and creators of value in marketing. Finally, the fourth section builds on findings from Instructables with a view to offer a theory of prosumer empowerment through peer-to-peer education.

8.2 A Refined Understanding of Prosumption

Many members in Instructables use commercial products they consume from the marketplace as raw materials or parts for other homemade projects. Many of those members also capitalise on re-consuming materials from unused products left from previous consumption or products salvaged from recyclables. Each of those members gets involved as a producer of his or her own products as an alternative to buying final market offerings or producing something that is not available in the marketplace. From a theoretical perspective, members in Instructables combine both roles of consumption and production as producers of their own products. Therefore, the experiences of members in Instructables offer empirical evidence of prosumption as suggested in key theoretical works (Toffler, 1980; Kotler, 1989; Ritzer and Jurgenson, 2010). Toffler (1980) has referred to people who produce some of their goods and services as “prosumers” while Kotler (1989) focused attention on prosumers as producers of their goods and services rather than buying them from the marketplace. Kotler (1989), in his response to the theory of prosumption as proposed by Toffler (1980), also predicted that some consumers as prosumers will even find themselves as better producers of goods and services than the marketplace. Nevertheless, much of the conceptualisation of prosumption by Toffler (1980) and Kotler (1989) have remained focused on prosumption as a form of self-production of services (e.g. cooking own food, repairing own car, painting own house...etc.). Both Toffler (1980) and Kotler (1989) have largely developed their concept of prosumption as an alternative to market-based professional services more than goods in the marketplace.

Consistent with the above initial thoughts on prosumption by Toffler (1980) and Kotler (1986), members of Instructables prefer to create some of their own products and services rather than buying commercial offerings from the marketplace. However, experiences from

Instructables primarily demonstrate prosumption as a form of creation beyond self-production of services or DIY in the context of services. Prosumers in Instructables mostly create material goods which are often used as replacements for some of their consumer products. Consequently, prosumption in Instructables contributes new insights into the existing understanding of prosumption which is linked to numerous streams of research in marketing such as DIY consumption (Wolf and McQuitty, 2011; Watson and Shove, 2008), craft consumption (Campbell, 2005), democratizing innovation (Von Hippel, 2005), convergence culture (Jenkins, 2006), mass collaboration (Tapscott and Williams, 2006), and collective innovation (Kozinets et al., 2008).

Few researchers in marketing have focused on providing empirical examples of prosumption (e.g. Xie et al, 2008) while many researchers have acknowledged prosumption in their works building on theoretical works by other researchers. On this basis, some researchers have understood prosumption in line with Toffler's terms (Toffler, 1980) while others have developed their understanding of prosumption in line with the recent theoretical works by Ritzer (2013) and his colleagues (Ritzer and Jurgenson, 2010, Ritzer et al., 2012). Ritzer (2013) acknowledges that Toffler has made a significant contribution to the conceptualisation of prosumption. Nonetheless, Ritzer (2013) argues that much of Toffler's work was ahead of its time because his ideas are mostly relevant to the internet users of today.

Overall, the above discussion illustrates that prosumption is suggested as a more significant practise within the space of the internet (e.g. Ritzer, 2013 Beer and Burrows, 2010; Fuchs, 2011). Furthermore, prosumption is increasingly addressed as a collective more than an individualistic behaviour in marketing (Tapscott and Williams, 2006; Kozinets et al., 2008).

However, experiences of members in Instructables present an insightful example of prosumption in marketing which is based on multiple forms of prosumption. Therefore, the examples of prosumption in Instructables is reviewed alongside other prosumption examples in order to offer a macro insight of prosumption as a combination of multiple manifestations.

8.2.1 Material and Digital Manifestations of Prosumption

The space of prosumption, similar to consumption, is central to the experiences of prosumers. For instance, some researchers have focused on the role of technology (e.g. the internet) as an enabler of new forms of consumption (e.g. Beer and Burrows, 2007). Based on this understanding, research on prosumption can be contextualised within two spaces in the literature of marketing: material and digital forms of prosumption. Material prosumption may refer to a manifestation of prosumption which is largely based on a material form of production (e.g. physical goods, DIY). This may refer to consumers who cook their own food (e.g. Xie et al, 2008), or get involved in creative consumption and DIY (e.g. Campbell, 2005, Wolf and McQuitty, 2011) which often take place offline and require intensive labour. However, a digital form of prosumption may refer to consumers who participate in a variety of digital activities such as writing consumer reviews, building their own websites and getting involved in user-generated and online projects (e.g. Davis, 2012; Hershkovitz, 2011; Magaudda, 2011).

Consistent with a material form of prosumption, DIY is increasingly becoming a popular consumer behaviour which is often associated with home improvement projects (e.g. consumers doing maintenance or improvement services at their homes). For example, Wolf and McQuitty (2011) exemplify prosumption from DIY experiences of consumers who maintain or improve their surroundings at home rather than using professional service

providers. Those consumers tend to use their skills to do various activities such as plumbing, remodelling, fixing, repairing, and painting. Such activities are consistent with the DIY consumer behaviour where consumers essentially replace the role of professional services. While DIY projects are often focused on the creation of individualised services more than the production of physical goods, prosumption might also include projects that contribute prosumer goods as demonstrated in the experiences of members from Instructables.

Members of Instructables have demonstrated their ability to produce complementary as well as competitive alternatives to commercial products in the marketplace. In this sense, prosumption in Instructables is more consistent with craft consumption as creative production of goods (Campbell, 2005) more than the production or reproduction of individual services. While Campbell (2005) focuses on craft consumption as a creative form of handmade production, prosumption in Instructables demonstrates prosumers' ability to use machinery and tools in addition to their hand skills. Overall, Campbell (2005) and others such as Wolf and McQuitty (2011) present distinctive examples of prosumption which are very consistent with prosumption as a form of material-based manifestation. In this sense, the experiences from Instructables correspond with the existing examples of prosumption as a material manifestation.

Prosumption in Instructables also manifests as a digital form of prosumption where each member in the community becomes a prosumer of knowledge. Each member in the community consumes digital information such as instructions, images, documented projects and comments from other members which eventually accumulates to create their own projects. In this sense, prosumers experiences in Instructables are also consistent with a digital form of prosumption as exemplified and noted in online consumer cultures (e.g. Ritzer and Jurgenson, 2010; Recuber, 2012). Such experiences are consistent with buyers and

sellers as prosumers of narratives, images. For example, Denegri-Knott and Zwick (2012) exemplify eBay as a virtual space for a social base of prosumption where users become consumers as well as partial producers of their own experiences.

The experiences of prosumers in Instructables demonstrates the dual nature of prosumption. On the one hand, members get involved as prosumers of material goods for their own use. On the other hand, those members get involved as prosumers of digital knowledge as publishers in the community. Such experiences from Instructables align with the interpenetrative nature of material and digital prosumption as conceived by Ritzer (2013). It seems that researchers in marketing tend to exemplify prosumption either as a form of material or a digital manifestation. On the one hand, prosumption is exemplified as a form of material manifestation either by consumers becoming producers of individual services or consumers becoming producers of their goods. On the other hand, prosumption is excessively linked to the immaterial productivity of consumers. However, experiences of prosumers in Instructables demonstrate that prosumption can be understood as a hybrid of material and digital manifestation. In this sense, prosumption is not merely interesting as a phenomenon which requires the approximation of consumption and production. But, prosumption is also interesting as an approximation of material and digital experiences of prosumers. In this sense, prosumers create material products for their own consumption while they simultaneously create digital products for shared prosumption with other peers (documentation of individual projects).

8.2.2 Individual and Collective Manifestations of Prosumption

Prosumption is essentially an individual involvement where a prosumer creates some or most of his own products rather than buys them from the marketplace. While mainstream consumers prefer to purchase goods and services from others, a prosumer prefers to

produce his own goods and services (Kotler, 1986). However, such individual involvement of the prosumer has been overlooked as many researchers have focused on the collective involvement of prosumers. Many works have addressed prosumption as a collective rather than an individual behaviour such as democratizing innovation (Von Hippel, 2005), convergence culture (Jenkins, 2006), mass collaboration (Tapscott and Williams, 2006), collective innovation (Kozinets et al., 2008), and tribal value creation (Cova and Dalli, 2008).

The above discussion notes the significance of the collective form of prosumption. Nonetheless, the focus on prosumption as a collective behaviour has limited researchers' understanding of the richness of individual experiences of prosumers among themselves or within groups of peer prosumers. For example, Tapscott and Williams (2006) focus on prosumers as collective collaborators with commercial online businesses. According to their views, mass collaboration relies on free individual agents coming together while becoming co-producers with firms to improve a given problem. Similarly, others such as Jenkins (2006) and Kozinets et al. (2008) have focused on the collective behaviour of consumers as co-creators and co-producers of intelligence and creativity for the advantage of firms, rather than for their own advantage. However, there are exceptions such as Xie et al (2008) who have focused on consumers' ability to become creators within the context of food prosumption. So, Xie et al (2008) demonstrates consumers' ability to become prosumers of their own food without the involvement of firms. There are also other exceptions with examples from collaborations among prosumers, rather than their collaboration with firms. Cova and Dalli (2008) demonstrate that members can collaborate with each other in a collective manner in order to create a 'tribal value' in online communities. Cova and Dalli (2008) demonstrate that consumers develop online communities as guardians of tribal value produced through peer-to-peer co-creation. Similarly, Bagozzi and Dholakia (2002) show

the role of virtual communities in shaping and influencing the identity of individuals through social action and collective participation.

Many researchers have understood and exemplified prosumption as a collective co-creation with commercial firms, rather than individual prosumption or co-prosumption among and between peer prosumers. In contrast, the example of prosumption in Instructables illustrates prosumers' ability to get involved as individual producers among themselves or as co-prosumers with other peer members.

Prosumption in marketing is increasingly regarded as a digital manifestation of consumers' roles of consumption and production. Moreover, prosumption is also increasingly viewed as a collective rather than an individual manifestation. However, experiences of prosumers in Instructables demonstrate the multiple manifestations of prosumption in terms of space (material and digital) and involvement (individual and collective). On this basis, prosumption in Instructables demonstrates a hybrid manifestation of prosumption at which material and digital experiences are combined. Moreover, prosumption in Instructables is a combination of individual and collective experiences of prosumers. In this sense, the prosumer becomes an integrator of resources while co-prosuming use value with other peer prosumers.

Consumers are largely viewed as buyers of final products supplied by firms and marketers in the marketplace (see Chapter one). Their ability to use, reuse and capitalise on material resources have been overlooked in the literatures of consumer research and marketing. Operand resources, which primarily comprise material resources, have been largely assumed as assets that are solely managed and distributed by firms as 'suppliers' rather than consumers as 'buyers' (Vargo and Lusch, 2004). Such assumption has probably developed from the managerial orientation of the theory of S-D logic by Vargo and Lusch

(2004). However, findings from Chapter six demonstrate that prosumers use, stock, and capitalise on material resources in a manner which is similar to firms. Prosumers in Instructables often use, re-use, modify, and shape various materials and products according to the particular requirements of their day-to-day projects, rather than the common use of such materials in the marketplace. Some prosumers focus on selecting alternative materials that minimise the costs of their projects while others focus on the creative re-use of materials for purposes other than those intended by their original manufacturers.

While prosumers continue to buy final products from the marketplace, they also buy raw materials and re-use items from previous consumption. This shows that prosumers can assume possession and use operand resources similar to how firms allocate their operand resources (Vargo and Lusch, 2004). Prosumers in Instructables evidently capitalise on a broad range of their operand resources namely raw and natural materials, tools and products salvaged from the recyclables. They sometimes buy materials and final products for some of their projects from the marketplace. Nevertheless, buying is not only limited to individual prosumers buying from firms. Similar to consumers, firms also buy materials for the production of their commercial products.

Arnould et al. (2006) have theoretically referred to consumers' possession of operand resources and suggested these resources may include tangible objects which are mostly acquired from exchanges with marketers. On this basis, the use and possession of operand resources by prosumers in Instructables offer empirical evidence on the cultural-based-theory of the customer as proposed by Arnould et al. (2006).

Building on Arnould's theory et al. (2006) and findings from Instructables, consumer's operand resources can be classified into two types: individual and marketplace-based

materials. Individual-based materials include all the tangible parts, commodities, items and final products acquired by prosumers from sources other than those supplied by mainstream markets. This may include free commodities salvaged from recyclables (e.g. neighbours, friends) or materials acquired from natural resources (e.g. wood from tree) or personal gifts. However, market-based materials refer to raw materials, parts and final products purchased from the marketplace. This distinction between individual and marketplace operand resources may help researchers to note the rise on consumers' ability to gain partial mastery over their affairs. Much of the marketing literature is focused on consumers' in terms of their use of operant resources rather than their ability to act on their operand resources (e.g. Baron and Warnaby, 2011; Claycomb et al., 2001; Grönroos, 1997; Kleinaltenkamp et al, 2012).

Prosumers in Instructables in many cases define their projects based on access to materials and tools (i.e. operand resources) that they can find at home, recyclable materials and natural resources as demonstrated in many examples in Chapter 6. Jhon and Graham are two of the examples which demonstrate consumers' ability to act on operand resources such as unused items and turn them into new useful products. In both examples, Jhon and Graham had stated that they were inspired to create their projects because they wanted to make use of their materials. So, those members choose what to make based on their access to material resources. Those consumers also use operant resources (e.g. knowledge and specialised skills) in their projects. The above discussion is not a suggestion to overlook the significance of operant resources of prosumers. It only demonstrates that access to operand resources is relatively significant and probably as important as the use of operant resources in prosumers' projects. Marketing researchers have often ignored the potential of consumers accessing and using their operand resources. For example, Arnould et al, (2006, p95) state

that “Much remains to be done to systematise our understanding of consumers’ operant resources...firms must understand how consumers juggle their own and firm resources in order to compensate for specific types of operant resource deficits”. This shows that research in marketing have overly focused on consumers’ operant resources on the basis of their interaction with commercial firms.

Findings from Instructables demonstrate that individual prosumers primarily integrate their operand and operand resources which eventually result in the production of material commodities for their own use. But simultaneously those individual prosumers participate with other co-prosumers as integrators of their operant resources in order to create value in the community. Prosumption manifests in Instructables as an involvement with the production of products without the involvement of commercial firms. In this sense, Members in Instructables become independent producers of broad range of their goods and services, which is consistent with the view of Toffler (1981). Members frequently produce their products mainly using materials from previous consumption or salvaged from their surroundings while in some cases they buy raw materials for their products from the marketplace. Nonetheless, members capitalise on their connection with the marketplace as a supplier of materials rather than capitalising on their connection with professional suppliers. So, such findings from Instructables offer empirical evidence on the practice of prosumption as a voluntary productivity which is dominated and directed by consumers rather than firms. This adds to the literature on prosumption while many previous works have regarded prosumption as a co-creative relationship with firms (i.e. suppliers).

The above resonates with Ritzer (2013) who has recently refined his understanding on prosumption as an interrelated process which do not require the overlapping of both roles of consumption and production. On this basis, Ritzer (2013, p.9) suggests that consumption

and production of products can occur at different points in time rather than simultaneously. Indeed, it is evident from Instructables that prosumption require individual members in the community to focus on consumption at some stages of their projects. Consumption iteratively occurs as a cost rationalisation of materials purchased by members, or as a re-consumption of their material resources. Similarly, prosumption occurs as a production involvement that serves multiple uses of prosumers including utility, functionality, design and concept products. Consistent with Ritzer (2013) members in IC often consume their resources at one point of time and produce something at a later point of time. Consequently, prosumption involves both consumption and production occurs separately rather than simultaneously.

Ritzer (2013) also suggests that prosumption should be viewed as a general process for consumer behaviour which includes both consumption and production as exceptional cases to understand the economic world. In other words, Ritzer (2013) views prosumption as a process which is exceptionally focused on consumption or production. Therefore, Ritzer (2013) describes both roles of consumption and production as extreme subtypes on a continuum of prosumption: “prosumption-as-consumption” and “prosumption-as-production”. However, findings from Instructables demonstrate that prosumption is essentially and iteratively focused on production more than the focus on consumption. Individuals occasionally consume materials and commercial products as resources which are eventually used to produce new other products that are used by prosumers. Therefore, the experiences of members in Instructables resonate with the view of prosumers as producers rather than consumers. It is consistent with Kotler (1986, p.510) who states that the essence of being a prosumer in contrast to being a consumer is “to prefer producing

one' own goods and services". Unlike prosumers, Kotler (1986) view most others as consumers exchange their earnings for purchases of final products from the marketplace.

The above discussion, therefore, acknowledges the significance of production as the role which takes over the consumer role in terms of prosumption. Nonetheless, such distinction suggested by Ritzer (2013) between prosumption-as-consumption and prosumption-as-production seems practically problematic. On the one hand, Ritzer (2013) acknowledges that consumers sometimes focus on the role of consumption (prosumption-as-consumption) while consumers in other times focus on the role of production (prosumption-as-production). On the other hand, Ritzer (2013) assumes these situations as exceptional cases while he regards that most prosumption combine consumption and production as equal roles in the behaviour of prosumers.

From a practical perspective, Ritzer's argument (2013) partially corresponds with findings from Instructables. Prosumption-as-production corresponds with the role of members in the community as producers of their products and services. However, prosumption-as-consumption seems mistakenly associated with prosumption. Prosumption-as-consumption is likely more relevant to other co-creative practices such as co-creation (or co-production), where consumers' productivity is occasional in the provision of products or services they will eventually consume. For example, Meuter and Bitner (1998) refer to three types of production based on customer participation with service providers: firm production, joint production, and customer production. While firms obviously take more involvement as providers of services in firm and joint types of production, customer production do not imply that firms are free from their responsibilities with their customers. For example, customer production may occur in self-service technologies but firms are still responsible for planning and managing the relationships with their customers. Such customer production in self-

services may not necessarily change the traditional notion of the consumer (Humphreys and Grayson, 2008).

In line with the distinction of prosumption from other similar co-creative practices in marketing, members of Instructables are regarded as prosumers and co-prosumers rather than being viewed as creators and co-creators of value. The production of value in the community occurs as a collaboration between individual members (i.e. prosumers) and other members (co-prosumers) in the community who co-prosume value. Each individual in Instructables is an integrator of both operand resources (i.e. materials) and operant resources (i.e. experiences of others) within the requirements of his projects as demonstrated in section 7.7. Furthermore, individuals develop and refine their projects through collective co-prosumption with others who collaborate as co-prosumers through productive feedback (e.g. validation, rating, commenting).

The above demonstrates that individual prosumers collaborate with the community as a collective group of co-prosumers in a manner which is similar to value co-creation where firms co-create value with their customers. Thus, prosumption may be regarded as a reverse process to co-creation which, rather than being initiated by commercial organisations, is dependent on individual prosumers having the skills and ability to integrate resources for their own purposes, and on refining offerings from peer prosumers (i.e. co-prosumers) as required.

The interaction between individual and other co-prosumers in the community takes place as a two-way relationship. Individual prosumers act as proposers of multiple products through the documentation and publication of their projects in the community. In return, other members as co-prosumers evaluate those projects and provide productive feedback.

Therefore, unlike the roles of co-creators, prosumers have more responsibility for the production of their own products, use value and the management of the overall experience.

8.2.2.1 Individual prosumption as integration of resources

Every member in Instructables uses his/her operant resources to act on their operand resources. Reframing some of the findings alongside some individual examples within the context resources integration illustrates that prosumers integrate their operand and operant resources. For example, Rad produces a Wireless router (the final product) by being able to act on his operand resources. In his project, Rad uses his operant resources (e.g. woodworking and painting skills, design skills, knowledge of electrical circuits, knowledge of computer software) in order to act on other broad range of operand resources. Most of these operand resources are his personal tools and items such as electronic tools (soldering iron, multi-meter), carpentry tools (scroll saw, table saw, carving chisel, mortising tools, glue and dowels), a drawing application, a wireless router, a 3 rev counter, and a space for work. Rad also acts on few operand resources acquired from the marketplace such as a plank of oak wood from a local hardware supplier.

There are also other examples which demonstrate that prosumers can apply their operant resources to a small scale of their operand resources. Sloane in most of his projects produce a broad range of final products by acting on wood materials from natural resources. But his projects require an extensive application of operant resources such as knowledge of woodworking, design and use of carpentry tools. Likewise, Thomas produces many of his final products by acting on building materials while his projects require operant resources such as knowledge of building construction, design, physical energy and mechanical skills. Some final products in Instructables demonstrate an advanced application of operant resources to prosumers' operand resources. Both Amber and Rani in most of their projects

use a broad range of their skills and knowledge of coding, programming, and engineering to act on a mix of micro and electrical parts. Overall, the above examples offer empirical evidence on the theory of the customer as a resource integrator in line with the theoretical propositions by many researchers in marketing (Vargo and Lusch, 2011; Arnould et al., 2006). Such findings from Instructables demonstrate the applicability of resource integration at the individual level of presumption.

8.2.2.2 Co-prosumption as creation of collective value.

The previous section has shown that individual prosumers apply their operant resources to their operand resources in order to produce final products. This primarily results in the production of material commodities for their own use. However, this section demonstrates that each individual prosumer also acts as a co-prosumer of value through participation with other peers in Instructables community. In a sense, this section advances from resources integration to value creation in line with the S-D logic theory proposed by Vargo and Lusch (2004). Prosumers in Instructables act on each other's as operant resources which eventually create knowledge-based value for individual prosumers and those who participate as co-prosumers.

Chapter Six has demonstrated the interactive process of presumption and how it contributes to individual projects of members. Also, Chapter seven has demonstrated the inspirational relationship between individual members who get involved in the teaching of their projects and other members who assume the role of learning individually and collectively. Building on these findings, individual members who undertake the role of teaching can be viewed as prosumers, while other members in the community who get involved as learners can be viewed as co-prosumers. By doing so, prosumers contribute most of the work through publishing their projects, while co-prosumers through minimal participation add knowledge-

based value to products and members alike. Then, shared projects construct the locus of interaction for value creation in the community.

Individual prosumers in Instructables collaborate as knowledge workers for the benefit of each other. Each prosumer acts on other members in the community as operant resources in his experiences. This is consistent with the research focus on operant resources as a source of wealth (Vargo and Lusch, 2004; Arnould, 2008). Co-prosumption mainly occurs as a member-to-member and community-to-member interactions. At the level of member-to-member, prosumers make use of each other's projects which leads to the creation of material (i.e. tangible) value. At the level of community-to-member, prosumers engage in ongoing constructive interactions which often lead to the creation of digital (non-tangible) value. For example, a project such as a desk clamp lamp publishes by Rani has received comments from many other designers in the community from views, to favouring the project, to making a practical use of the project.

8.2.3 Types of prosumption through skills and commitment to projects

Despite this growing research on prosumption, many researchers in marketing including Ritzer (2013) seem to equate prosumption to closely-related practices in marketing particularly consumer co-creation and consumer co-production in marketing (e.g. Comor, 2011; Ritzer and Jurgenson, 2010; Zwick et al., 2008; Bonsu, and Darmody, 2008). Apart from Ritzer and his colleagues who appear to note the potential differences between the roles of prosumers and co-creators, other researchers characterise their works on co-creation but then rely on heuristic assumptions or process in terms of prosumption as a synonym for co-creation or co-production rather than equated to co-prosumption. So, there is hardly any empirical research that are directly linked to empirical observations or findings in terms of prosumption and how the nature of prosumption can be equated or distinguished

from other similar practices. Those researchers often fail to note that the rise of the prosumer societies go beyond marketers' conceptualisation of co-creators and co-producers in the marketplace.

This section uses findings from Instructables in order to demonstrate a typology of prosumption through the observations of two dimensions from projects published by members in Instructables namely level of skills (i.e. or competence) and degree of commitment (i.e. or product complexity in a given project): four types of prosumption are proposed: assembly, modification, artistic and invention which are discussed further below.

8.2.3.1 Assembly: production of utility-focused value

'Assembly' is a term given to such a type of prosumption by members 'assemblers' in Instructables which focus on the proposition and sharing of projects that consume finished products using basic tools (if required) and finished materials. Assemblers often focus on sharing projects which demonstrate their experience or knowledge within specific range of products or markets. For example, an assembler may propose a project that 'teach' other members in the community 'how to assemble a first aid kit' or 'how to prepare a specific food recipe'. A good example of assembly type project is offered from the projects published and documented by Duncan (see table 2).

Member's nickname:	Duncan
Gender:	Male
Age:	Not stated
Project title:	Bug out bag first aid kit
Description and objectives:	In this Instructable I will be showing you how to assemble a first aid kit for your bug out bag. For those of you who are new to the concept of a bug out bag please check out this link to the Wikipedia page. When you are in a survival situation you are almost guaranteed to have some kind of first aid need that will arise. Not having a well

	assembled first aid kit in an already chaotic situation can make everything much worse.
Tools used:	None.
Parts/materials list including costs (if any):	<ul style="list-style-type: none"> - The pack is made by Voodoo tactical. It is a MOLLE compatible first aid pouch with heavy duty zipper. This bag cost around \$15 dollars. - A pocket resuscitator for doing CPR. Available in eBay for around \$10. - A couple of suturing options in the first aid kit. <p><u>Option #1:</u> sterile packed suture with attached needle. These can be found on eBay for quite cheap around \$2 /piece. It is also a good idea to have a couple of sterile packed scalpels to go along with this part of the kit.</p> <p><u>Option #2:</u> Sterile packed skin stapler and separately packed staple remover. This can be an invaluable tool if someone is injured as it requires very little technical know-how. These can be picked up on eBay for around \$15 for the set typically.</p> <ul style="list-style-type: none"> - A multitude of bandaging options including the following: 1 ACE elastic bandage with metal clips, 1 roll of gauze, 2 non-stick gauze pads 3x4 inches, 1 roll of medical tape, 2 large bandages, 5 regular bandage strips, and 4 butterfly closures. - Other items that your first aid kit should contain are as follows: hand sanitizing wipes antibiotic ointment, alcohol wipes, tweezers, cotton swabs, latex gloves, cotton balls thermometer, scissors, Ibuprofen pills in a small watertight bottle, antihistamine pills in a small watertight bottle, and bismuth pills also in a small watertight bottle.

Table 2 An Extract from an Assembly Type Project by Duncan.

Such assembly projects require knowledge and experience in specific consumption activities such as medical equipment or food recipes. In line with the definition proposed earlier for prosumption, assemblers are more focused on value creation activities through integration of different finished products, or sometimes even combining exiting brands from commercial suppliers. Assembly projects generally require lower level of skills (i.e. competence) since these projects often rely on common knowledge and less commitment to projects. Nonetheless, a level of skills should be regarded as a subjective experience by which a desired final product takes more or less commitment to a given project in Instructables. So, such assembly projects in the community can be viewed as less prosumerly consumption practices but with the acknowledgment of variations among individuals in terms of skills and commitments.

8.2.3.2 Modification: production of functionality-based value

'Modification' is a term given to a type of prosumption by members of Instructables 'modifiers' which focus on the proposition and sharing of projects that demonstrate a prosumer talent of modifying finished parts or natural resources such as wood using basic or specialized tools and more complex stages of production. In contrast to assemblers, modifiers will require higher level of skills (or competence) and commitment to projects (time, cost, and physical effort) to produce a desired final product. For example, modification projects often require more physical efforts from members as a modifier needs to make some minor or major changes to finished parts or raw materials in order to make an integration of a functional product. An extract from a project published by Donald offers a good example of this kind of modification projects in Instructables. Donald provides a typical example of a modification type project that focus on making a functional final product to be used in his workshop (see table 3).

Member's nickname:	Donald
Gender:	Male
Age:	61
Project title:	Magnetic Wrench holder
Description and objectives:	I bought two sets of professional wrenches. There are 14 wrenches in each set and they came in a plastic holder. The first time I took out one of the wrenches, one of the little plastic tabs that holds them in, broke. I had already had bought some magnetic holders for my stubby wrench sets, but they were no longer available, so I decided to make my own. Here is how I did it and they work great.
Tools used:	<ul style="list-style-type: none">- Power drill,- 5/16" drill- Vice- Plastic head hammer- Ruler
Parts/materials list including costs (if any):	<ul style="list-style-type: none">- 64 - 1 " L-brackets (8 for optional handles)- 56 - Rare earth magnets- 2 - Pieces of 3/4" plywood cut to size to fit your tool box drawer (Mine were 6" X 14")- Wood screws- 2 - wooden dowels from foam paint brushes (optional)

Table 3 An Extract from a Modification Type Project by Donald.

Some minor modifications of projects in Instructables might require less prosumerly consumption practices such as ‘how to make fire starters’ or ‘how to make a cable clip from tubing’. Both projects might require a member to add some minor changes or apply minor treatments to some materials in order to make a desired final product. Modifiers are more involved in terms of treatments to raw materials than assemblers who frequently assemble ready-made products into newer ones used by the consumer.

8.2.3.3 Artistic: production of artistic-based value

‘Artistic’ is a term proposed to name those projects which are published by members of Instructables ‘artists’ which focus on the proposition and sharing of projects that typically require higher skills and degree of commitments to projects. Similar to modifiers, artists apply modification to raw materials. However, artists frequently use specialized technology (e.g. laser cutters, computer programs, and machines) to shape materials into required designs for final products. Also, artists focus on developing new products which are defined by their design rather than functionality. Artists spend more significant commitment to projects such as time, efforts and money in putting materials into final products. Tamara provides a typical example of a design type project. Tamara spent two months to design a costume which is made from leather (see table 4).

Member’s nickname:	Tamara
Gender:	Female
Age:	Not stated
Project title:	Ryuk Costume
Description and objectives:	Ryuk is a death god featured in the manga/anime/live-action-films called Death Note. Have no clue what I'm talking about? It's this guy right here! I based my costume mainly on an image from Takeshi Obata's Blanc et Noir (an art book by the artist of the Death Note manga. See previous link for the particular image I'm talking about).
Tools used:	- Wood-burning tool

Parts/materials list including costs (if any):	This costume is made up of a long leather shirt, leather pants, leather boots, a pleather-and-leather belt, leather belt bag, leather notebook, 3 resin rings, 2 bracelets, earring, "arm skull", buckle, belt end, chain connector, pen, belt and notebook cross, shrink-plastic chain, staples and teeth, latex mask, resin eyes, "painted" and styled wig, and a whole lot of feathers. Everything was either made or heavily altered, including the boots.
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Table 4 An Extract from a Design Type Project by Tamara.

Artists as a group of prosumers in Instructables have different level of skills and commitment to projects than other groups of prosumers. Artists prosumers focus in the production of artistic-value of a project rather than other handy jobs such as the case of other prosumers who often get engaged in DIY practices. Moreover, artists in comparison to other types of prosumers in Instructables show a high level of curiosity and creativity since an artist often use the same work procedures and get involved in an ongoing creativity within the field of arts. Someone might argue that artists would be highly regarded in society by people since an artist gives many ways a kind of reflections on what is going on in the society. Other prosumers especially assemblers and modifiers are usually not seen by the government, institutions and enterprises as somebody who is eligible for funding or sponsorship.

It is observed that some members in Instructables describe themselves as artists in terms of their relationships with the marketplace. Many of those prosumers often shop in the marketplace for blocks rather than ready-made products. For instance, artists use paints ready oil paints or other kinds of paints. So, what an artist can do with paints is totally different than applying prosumers' work to a canvas. Unlike modifiers who evaluate their projects in terms of functionality and often find more market-alternatives in terms of commercial products for the consumption in their projects, an artist looks in a product with other eyes that is focused on objects as pieces of arts. So, how far is a product can be made

better in terms of design value and not only in terms of functionality as the case with modification type of projects.

8.2.3.4 Invention: producers of conceptual-based value

‘Invention’ is a term used to name projects by some members of Instructables ‘inventors’ with the highest profiles of skills and commitment to projects. Inventors propose and share instruction for the completion of complex and time consuming projects at least from the perspective of many mainstream consumers. Those inventors often get more engaged with complex projects such as building an electrical robotic drum or building a robotic surveillance system. In this sense, invention requires the engineering and creation of a desired final product often using engineering skills. A typical invention project is thoroughly evident in the documentation of a project published by Noel (see table 5).

Member's nickname:	Noel
Gender:	Male
Age:	23
Project title:	Reginald: a UDP surveillance bot; control via the Internet
Description and objectives:	Reginald started from the simple, yet bold idea to control a bot from anywhere in the world with a live video feed. What I wasn't expecting was for Reginald to develop into an involved, feature rich project. With my work and money, I was able to complete a project exactly to my satisfaction and more. This tutorial chronicles the entire project: from top to bottom. Reginald is a very useful project for the end user. If a user is interested in checking on his or her house from school or work, that person would be able to do so from an infinite amount of angles. The user can move around the house wirelessly and greet others. If you have children you can let them know you always have your eye on them!
Tools used:	<ul style="list-style-type: none"> - A soldering iron. - Multi-meter - Tools to cut the chassis pieces out - A drill, - A hammer. - Other basic tools.
Parts/materials list:	<u>Chassis and misc. mechanics:</u>

	<p> (1) 3/8" Precision Shaft 2.00" \$5.25 each (2) 3/8" Precision Shaft 1.00" \$4.80 each (3) 3/8" Ultra Precision Ball Bearings \$7.99 each (2) 3/8" 0.770" Clamping Hubs \$7.99 each (2) 3/8" 48 tooth Plain Bore Sprockets \$3.40 each (2) 3/8" 20 tooth Plain Bore Sprockets \$1.92 each (3) 1 foot of Plastic Chain 0.1277 \$5.95 each (2) 15" x 15" x 0.25" ABS Plastic \$9.99 each (4) #10 Nylon Spacer 0.375" Diameter 0.5" \$0.22 each (1) Hitec Servo Shaft Adapter to 3/8" bore \$12.99 each (2) Hitec DDT500 Direct Drive Tilts \$24.99 each (2) Vertical Aluminum Mounts \$6.99 each (3) Hitec HS-422 Servo \$9.99 each <u>Drivetrain:</u> (2) Hitec HSR-1425CR Servos \$16.99 (2) ABS Wheels 6.00" \$5.48 each (2) 0.770" Servo Hubs \$4.99 each (2) Vertical Servo Tray \$5.95 each (2) Caster Wheels \$9.99 each <u>Flashlight:</u> (1) Luxeon Rebel Triple-LED Narrow Lens \$5.95 each (3) LEDs - Infared 950nm \$0.95 each (1) B.E.C. or Molex connector (1) Black Poster Board \$1.95 each Electronics (Arduino and Custom PCB): (1) Arduino Uno R3 \$21.95 each (1) Arduino Ethernet Shield R3 \$38.02 each (8) Male B.E.C Connectors \$0.59 each (1) 7812 Voltage Regulator ~\$1.95 each (1) 7805 Voltage Regulator ~\$1.95 each (2) 100uF Capacitors ~\$0.95 each (1) 220uF Capacitors ~\$0.95 each (3) NPN Transistors ~\$1.50 for all (5) Solderless Headers - 10 pin Straight \$1.50 (1) TRA Connector(Male/Female) \$5.09 each (1) 11.1 V 5000mAh Li-Po Tenenergy \$49.99 each <u>Surveillance Cameras:</u> (1) Trendnet TV-501P POE Network Camera \$105.00 each (1) Agasio A502W Wireless IP Camera \$64.99 each (Optional: used for viewing Reginald from 3rd perspective) <u>Ballistics:</u> (2) Dream Cheeky 908 Thunder Missile Launcher \$22.05 each Network: (2) Routers \$? </p>
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Table 5 An Extract from an Invention Type Project by Noel.

Inventors such as Noel contribute projects with the highest intellectual creativity in terms of a desired final product as a new concept. Noel, for instance, in this project offer a new desired product that is more of a household surveillance technology system by which individuals are able to monitor their houses at work using the internet. Similar to Noel, Max, who is a self-employed member invents a remote control device that contributes an intellectual type of a product concept. So, both projects by Noel and Max can be viewed as potential products for a commercially versions in the electronics industry. Overall, such invention projects, in comparison to other types of projects, can be viewed more of prosumerly practices of consumption that are similar to those consumption practices by business consumers.

Type of prosumption	Activity	Focus for individual value creation	Required materials	Used Tools (if needed)
Assembly (assemblers)	- An assembly of various finished products into a new product.	- Utility of final product(s)	- Finished products.	- Basic household tools such as cooking and baking kits.
Modification (Modifiers)	- Minor or major change of finished parts/natural resources to produce a new product.	- Functionality of final product(s)	- Modified parts or natural resources such as wood.	- Hardware tools and equipment such as keys, locks, hinges, latches, handles, wire, chains, plumbing, tools, utensils, and machine parts.
Art (Artists)	- Creation and design of some or all parts to introduce a new product (often require using craft skills).	- Design or shape of final product(s)	- Created or shaped parts.	- Hardware tools - Laser cutters - Machines - Computer programs
Invention (Inventors)	- An engineering and creation of a product concept often using engineering skills.	- Concept/ idea of final product(s)	- Complex parts or/and electronic/electrical parts (circuits, resistors, inductors, capacitors, voltage sources, and switches)	- Hardware tools - Laser cutters - Machines - Computer programs - Engineering drawings

Table 6 Types of Projects by Members in Instructables.

Finally, the above table 6, in line with the proposition of four types of prosumption, attempts to alienate theoretical boundaries in terms of projects types in Instructables that are published by different groups of members. The table offers rich descriptions in terms of how a given type of prosumption can be linked to groups of prosumers (assemblers, modifiers, artists and inventors), desired value (utility, functionality, design and concept), tools and materials.

8.3 Prosumer Empowerment through Discursive Power

Prosumers of Instructables (i.e. assemblers, modifiers, artists and inventors) engage in productive relationships through peer-to-peer and collective sharing. Prosumption, as practiced in Instructables, is consistent with an individualistic as well as a collective manifestation of prosumption. A prosumer in Instructables act as a 'teacher' who 'inspire' other peer members in the community. A prosumer also acts as a 'learner' who get inspired by other members through a collective process of learning. As evidenced from Instructables, a member typically takes the teacher role through the use of multiple linguistic techniques (e.g. textual or/and photographic description and fragmentation of projects) and procedures (e.g. documentation and publication of projects). However, a member takes the learner role through the use of collective linguistic techniques (e.g. comments, feedback and suggestions) and procedures evidenced in the community (e.g. featuring members, favouring projects and voting for winners).

Members of Instructables use the community as a space for prosumption practices. In line with a Foucauldian interpretation of power in Foucault's terms (1977) as a 'co-creative and relational force' among social actors, Instructables serves as a field of action and

interactions for its members (i.e. prosumers) by which they engage in co-productive and discursive relationships. Also, such space of consumption (or prosumption) as in the case of Instructables is central to such prosumption practices. Central to studies of consumer empowerment, some researchers such as Denegri-Knott et al. (2006) refer to the importance of a field of action as a source of practices legitimisation. Denegri-Knott et al. (2006), therefore, invite us to challenge existing systems of knowledge in the marketplace and explore how the space of consumption is discursively constituted. On this basis, it is argued that prosumers of Instructables challenge or modify dominant systems of knowledge that are often legitimised and constituted by powerful agents in the marketplace (e.g. manufacturers and marketers).

Based on the above discussion, it is possible to view power in Instructables as a discursive and co-creative force as proposed by Foucault (1977) and a source for consumer empowerment as proposed by Denegri-Knott et al. (2006). In this case of Instructables, practices by members rely on a discourse of relational power/knowledge (Foucault, 1977) which in turn produce discursive practices that challenge existing dominant knowledge systems (e.g. mainstream consumption such as purchase of final market offerings, commercial products and goods), create a new consumer subject (i.e. the prosumer) and introduce variety of new products (i.e. prosumers' products).

A recap of main findings from Instructables enable us to understand discursive prosumer power as a source for members' productive relationships in the community. Consequently, prosumers in Instructables are empowered as individuals through self-discipline that govern practices and magnify empowerment within the group of prosumers through collective education. Thus, the remainder of this section offers two main arguments: how power relations shape prosumption as a discursive practice in Instructables (i.e. relationships and

prosumer discursive power) and how members are empowered (i.e. self-discipline and collective education) through discursive power relations.

8.3.1 Peer-to-Peer, Collective Relationships, and Discursive Prosumer Power

A source of discursive power is evident in Instructables through a critical analysis and re-thinking of discursive practices of members of the community. Consistent with Foucault's (1977) argument about the effects of power as a producer of knowledge and discourses, prosumers in Instructables engage in peer-to-peer and collective relationships that in turn enable them to produce and reproduce a new system of knowledge that would not be possible otherwise. Engagement of members occur in a digital space which is heavily occupied by linguistic forms that are employed for effective and productive relationships. Such linguistic forms include the way members use some written elements of a language such as words, sentences, examples and tables in the description of their projects.

Members of Instructables also use some other illustrations such as photographs which can be viewed as a form of language since a picture is worth a thousand words as in the popular English or universal idiom. Nonetheless, the use of photographs by members also add an important point about the way members employ photographs as means in a system of relational power and production of prosumer knowledge. However, it might be argued that members use textual and photographic description as substitutions for the absence of spoken language. But this then raises wonders about the possibility of presumption in other video-based online communities. Based on multiple netnographic observations and analysis of interviews, it would be rather naïve to neglect the documentation and publication process that dominates the order of knowledge production in Instructables. Also, it is evident that members make explicit reference to their roles as 'teachers' or 'instructors' who are trying to 'inspire' other peer members. Therefore, this is not an argument against other potential

forms of prosumption in other online communities that would be dominated by a verbal language or videography. But this argument emphasises linguistic forms of interactions to prosumer discourse evident in the community in line with many researchers who emphasise the role of language as an application of discursive power (e.g. Fairclough, 2001; Foucault, 1977).

Foucault (1977; 1978), in contrast to those who undermine his understanding of language significance to discourses, invite us to explore the extent to which a language serves or undermine power. But Foucault (1977; 1987) also invite us to shift our understanding of discursive power from a linguistic concept to a political action (Hook, 2001). In this a way, a Foucauldian understanding of discursive power help us not to limit a given discourse (i.e. the prosumer/ prosumption) only in line with the linguistic meanings or scarcity of meanings as pointed by Hook (2001). In this sense, practices by prosumers in Instructables can be associated to other ideological or discursive meanings. Indeed, there are two main discourses which can be derived from the discursive practices of members as prosumers (e.g. rules, norms, incentives) through peer-to-peer and collective relationships: A discourse of prosumer power as complementary to market power and a discourse of prosumer power as resistance to market power which are discussed next.

8.3.1.1 A discourse of prosumer power as complementary to market power

Members in Instructables combine the consumer and the producer roles for the purpose of their projects, though those prosumers in the community focus on production rather than consumption. At a collective level of prosumption, prosumers can be also viewed as immaterial labour partners through teaching, learning and sharing relationships. This view of immaterial labour is consistent with the discussions of Cova and Dalli (2009) who argue that consumers do actually work through co-production with different partners in the market

for different purposes. Nonetheless, Cova and Dalli (2009) focus on collaboration among mainstream customers (i.e. service customisers) who are more or less users of resources (i.e. commercial brands) provided by companies rather than consumers.

Cova and Dalli (2009) like many others (e.g. Lysonski and Durvasula, 2008; Kerr et al., 2012) link their discussions to the rise of consumer power and a discourse of consumer productivity in markets and digital spaces of consumption. Likewise, there is a discourse of prosumer power that is implicit to some of the peer-to-peer practices by members in Instructables. Prosumers of Instructables are similar to working consumers as a group of immaterial labours but those prosumers nonetheless use their resources rather than the resources of companies. Essentially, a prosumer through sharing of his resources engage other peers as learners who can co-prosume value in the context of his projects (i.e. mainly through validation or reproducers of prosumer experiences).

Prosumers in Instructables view some of their production as complementary alternative to market offerings. In this sense, prosumers refer to the expansion of their choices from merely buying to the advantage of making or producing. So, this demonstrate that prosumption is essentially a practice which is rooted in consumer culture. Put simply, prosumers in Instructables are not such that part of an ideological movement against consumer culture. In this way, such practices which are focused on the production of prosumer knowledge through relations enable us to understand the source of discursive power in the community. Prosumers through their engagement with the production of non-market alternatives constitute a new knowledge and challenge restrictions often imposed on public mass of consumers. Also, mainstream consumers are frequently described as dupes and victims of consumer culture (Campbell, 2005) since consumption rather than production is viewed as a destructive behaviour to scarce economic incomes of households and scarce resources

in the environment. So, prosumption is arguably inject a new mentality in terms of prosumers becoming more of productive consumers.

8.3.1.2 A discourse of prosumer power as resistance to market power

Prosumption is addressed by some prosumers as a competitive alternative to buying commercial products. Such prosumers often reflect on the failure of market system (e.g. quality and availability of products) in terms of meeting consumer expectations. So, a discourse of resistance is noted in Instructables not such that which is concerned with consumer culture as reported in some people who reject to be labelled as consumers or condemn the unethical practices of firms (e.g. Dobscha, 1998). Rather, a discourse of resistance in prosumption is noted as relevant to personal expectations of prosumers in their society or improvement of trading conditions and connections with the markets, products and firms. For example, Denegri-Knott (2004) investigates the practice of peer-to-peer file sharing and illustrates how such practice which is deemed deviant affects the trading conditions between providers (i.e. producers) in the industry and end users (i.e. consumers). Nonetheless, this work by Denegri-Knott (2004) perhaps offer a stronger form of resistance to modify the nature of market or products in the industry since it might be associated with risks to those involved or legal consequences. To this end, prosumers in Instructables might be more reliant on a softer form of discursive power that could modify the market on a long term-basis and bring intellectual skills to consumption and new consumer subjects.

It is argued that the relationship between consumers and producers will continue to be an area for power struggle and negotiations. However, if a discussion of 'soft power' is derived from the political argument by Nye (2004, p.34), then it would be possible to refer to such prosumer resistance as "the ability to get what you want through attraction rather than coercion or payments". So, prosumers in this sense seek self-discipline (e.g. self-sufficiency,

self-satisfaction...etc.) rather than becoming fully submissive and dependent on mass consumer markets. Most prosumers of Instructables are in essence interested in the notion of production since some of them evolve as business prosumers. Overall, a discourse of resistance to the practice of prosumption is consistent with Tew's (2006) theorisation of a positive co-operative power (power to) among people (i.e. consumers) who share mutual interests and appreciate their commonality more than differences.

8.3.2 Self-Disciplinary, Collective Education and Prosumer Empowerment

Self-discipline of prosumers is strongly correlated with the levels of discursive and extra-discursive practices of prosumption and co-prosumption in Instructables. In this sense, prosumers engage in various discursive practices (i.e. the textual level of a discursive practice as recognised by a Foucauldian analysis) (e.g. Hook, 2001) through sharing and publishing projects in the community or discursively co-prosuming collective value with other peer members. All discursive practices (e.g. procedures of documentation, publication of projects, contests, and incentivisation) follow a self-regulating process through self-disciplining and collective education. So, the subject of the prosumer is normalised as an informative, generous with knowledge, intelligent, vibrant, competitive, skilful and creative member who can inspire other peers through teaching them skills for market and society.

Extra-discursive practices (i.e. the material level of a discursive practice as recognised from a Foucauldian perspective (e.g. Hook, 2001) are also reflected in the physical involvement of individual prosumers with the systematic material production and finishing of their projects in most cases according to a normalised process (e.g. consumption of second-hand products and use of found products in the household). Indeed, members are similar to bloggers in terms of the work by Shankar et al. (2006); prosumers attempt to apply the step by step macro-level politics in the community to the micro level of the individual as they over

time become more disciplined and gain knowledge from peer members. Prosumption is consistent as a technology of the self in a way that is similar to 'bloggers' of Shankar et al., (2006).

The proposed typology of prosumers in Instructables (assemblers, modifiers, artists and inventors) also add empirical evidence in terms of the discursive practices of prosumers in Instructables. For example, the combination of skills and commitment to projects undertaken in the community are largely shaped by the nature of knowledge circulation in the community as well as other normalisation that take place in the community through the power of featured members and administrators (incentivisation and sponsorship of projects in particular themes). As a matter of interest, many members from Instructables have been able to define the type of their projects as per the proposition made in the online interviews.

Overall, prosumption is empowering but also disciplining to prosumers. As argued by Shankar et al. (2006) in line with a Foucauldian terminology, prosumers at once liberated and disciplined. In terms of empowerment, consumers are liberated and armed with technologies of self that bring skills to their life projects. Consequently, individual members in Instructables often associate their abilities as producers in terms of enrichment and outcome of their lived experiences or the positive effect over their personal capacity in market and society. At a collective level of self-discipline, members in Instructables also recognise empowerment through ongoing peer-to-peer education (i.e. validation and reproduction of individual experiences).

In terms of disciplinary power, prosumers are subject to being caught up by the technologies of domination in the community. For example, most participants in Instructables may not have influence over the dominant policies in the community and continue to participate as a

product of community sustainability. Some members either might not have the time to influence policies or those who are in power might not be interested. Some areas of tension might emerge over time in relation to the categorisation of members and status in the community (e.g. featured, administrator and rider come and go members). Moreover, Instructables dominates not only as a publisher but also as a manufacturer of chosen products or selected contributions. In the meantime, most members continue to publish their projects as creative commons available to public domain or commercialisation.

It seems difficult to think of corporate technologies to make use of the projects published by those consumers. This is not only because many consumers might be happy to see their ideas coming into light but because most of the projects have values at the household level. Also, many ideas of the projects published are already available commercially since members of Instructables frequently make their non-market alternatives but nevertheless they inject commercial brand, professional services and business insights into their experiences. Overall, prosumer empowerment as a discursive practice in Instructables is a subjective experience which is magnified through peer-to-peer education. In this sense, each member in Instructables initiates his projects while other peers offer support to those individualistic projects and they all together engage in an ongoing educational system of self-regulatory.

8.4 Summary

The findings show that a prosumer, in contrast to a consumer, use existing products in the marketplace as components for his projects rather than end products. A thematic analysis of archived projects demonstrates the multiple benefits of prosumption, and the practical value of prosumption. By identifying the dimensions of skills and commitment to projects uploaded by Instructables members, four types of prosumption are suggested: assembly,

modification, design and invention. Each of these types is described and distinguished from the other types. Overall, prosumers use the digital space of Instructables to legalise their action, constituted and re-constitute new knowledge, normalise a new subject of the prosumer through peer-to-peer production.

CHAPTER NINE: CONCLUSIONS AND FUTURE RESEARCH

9.1 Introduction

This chapter offers a summary of the conclusions as well as future research. The chapter comprises three main sections. Firstly, the chapter provides a brief overview of the research comprised in this thesis. of the main points in this thesis. Secondly, the chapter provides on key contributions within three areas, theoretical, methodological and managerial contributions. Thirdly, the chapter reports a number of the limitations in the present research and potential research. Finally, the chapter concludes with a summary.

9.2 Research Overview

This thesis examines in which ways prosumer behaviour is manifested in an online community. In so doing this contribute to the relevant literature by analysing the nature of value, by further developing the distinction made by Humphreys and Grayson (2008) between peer-to-peer and company-consumer prosumption, and by discussing the relevance of use value and immaterial labour in peer-to-peer prosumption, which is then illustrated through empirical work. As a result, prosumption is conceptualised as valorisation of immaterial labour based on collective, peer-to-peer use value through an analysis of Instructuables.com where prosumers collaborate with peers to create value.

This thesis offers a review of the relevant literature on prosumption and argues that there are several differences between prosumption and resonant terms such as consumer co-creation. The literature review shows that the terms co-creation or co-production are often linked with consumer co-creation of exchange value alongside commercial suppliers, whereas prosumption does not necessarily require engagement with professional providers. Prosumption does, however, often require prosumers to re-construe the symbolic meanings

and use value of commercial offerings for their own purposes and in their own collaborative ways.

The empirical research findings illustrate the nature of prosumption at Instructables and present a range of prosumption practices as described by peer-to-peer prosumers. This community hosts collaborations among members in a variety of DIY and homemade projects within broad categories such as technology, living, outside, workshop, food and play. A thematic analysis of archived projects demonstrates the multiple benefits of prosumption, as well as the immaterial labour and use value involved in peer-to-peer prosumption. This has enabled further analytical insights into the differences in terminology and a stronger theoretical conceptualisation of prosumption.

The relationship between prosumption and co-creation may be viewed as a continuum, which emphasises prosumption as use-valorisation of immaterial labour. But the roles of prosumers and co-creators can overlap as illustrated in the findings, and the distinctions between prosumers and co-creators remain fluid. However, prosumption as a concept can now be more clearly established and as outlined above prosumption was defined as valorisation of immaterial labour based on collective, peer-to-peer use value production. Where co-creation is usually initiated by firms, for commercial purposes and exchange value, prosumption will be initiated by peer prosumers and involve immaterial labour to generate the use value and benefits to such prosumers. Prosumption is nevertheless recognised as a market-based phenomenon subject to its intrinsic power relations (Moraes et al., 2011).

The findings from the present research demonstrate that prosumers perceive individual and collective empowerment through their participation in an online prosumer community named

as Instructables (see section 1.4) with less potential for firms' exploitation. So, unlike co-creators who are said to be empowered but disciplined or exploited through their participation with firms (Zwick et al., 2008), prosumers gain a degree of control over their consumption through the independent production of their products or the possibility to participate with other consumers (i.e. co-prosumers). Prosumer empowerment is evident in the behaviour of members in Instructables in terms of how they use their products as complementary or competitive alternatives to market offerings. Prosumer empowerment is also explained through the experiences of members in Instructables as a product capability or a producer capability. The former group of prosumers focus on the product-related outcome in their experiences (e.g. design, shape, colour of products). The latter group of prosumers, however, focus on the personality-related outcome in their experiences (e.g. self-confidence, intelligence).

9.3 Theoretical Contributions

This section offers a discussion of the most important contributions made throughout the chapters of this thesis. This thesis started as a synthetisation of multiple research themes which can be associated with the literature of what can be labelled as 'consumer productivity'. Consumers in many published works in marketing and consumer research are increasingly theorised as producers (e.g. S-D logic of marketing, craft consumption, resources integration, consumer value and consumer empowerment). Most of the conceptual synthetisations in this thesis have been developed from the literature of S-D logic of marketing proposed by Vargo and Lusch (2004) or the development of its foundational premises namely resources integration (e.g. Arnould, 2008) or the roles by which consumers participate in the production of value mainly as co-creators of value with firms. Consumer productivity through the theory of S-D logic was found to be a promising area in the literature

to address the role of consumers as producers, integrators of operant and operand resources and creators of in-use and exchange value. Apart from Humphreys and Grayson (2008) whose reference to the interesting roles of co-creators, co-producers and prosumers signify the need to address the potential differences between those roles, much of the literature on consumer productivity remained focused on the role of individual consumers as co-creators or co-producers more than being regarded as prosumers. Likewise, the role of consumers as groups or tribes have been regarded more as of being tribes of consumption (Cova and Cova, 2002) rather than being regarded as groups of production (or prosumption).

Throughout extensive reading on the literature of S-D logic of marketing, a point of conflict has emerged from the confusion in terms of the theoretical and empirical differences between two closely related roles of consumer participation as a producer: the role of the consumer as a prosumer which has been proposed decades ago by Toffler (1981) and the role of the consumer as a co-creator of value which has been synchronically discussed and developed by Vargo and Lusch (2004) and Prahalad and Ramaswamy (2001; 2004). Consequently, a gap in the consumer behaviour research has been identified in terms of the potential differences between prosumption and consumer co-creation and what it means to the nature of participation among and between consumers and producers.

The service dominant logic of marketing proposed by Vargo and Lusch (2004) offer interesting concepts which are of more theoretical relevance to consumer productivity such as 'operant resources', 'operand resources' and 'value' (i.e. consumer value). Indeed, Vargo and Lusch (2008), in their response to comments on S-D logic by other authors, have also acknowledged that such S-D logic requires development in the context of consumer behaviour since most of its conceptualisation was developed from the perspective of

businesses (i.e. firms, manufacturers, suppliers and marketers). On this basis, prosumption is viewed better equipped to deal with consumers' agency of Instructables rather than other terms co-creation or peer-to-peer-production.

Drawing on findings from Instructables, prosumers combine both roles of consumers and producers in their experiences. Co-prosumption is also possible with other consumers to magnify value in use though it is not essential as in the case of consumer co-creation. A prosumer can integrate resources without the involvement of others neither firms or other co-prosumers. So, co-prosumption is more related to how groups of consumers can engage in collective production and magnify rather than create value in use. Peer-to-peer production is similar to co-prosumption as prosumption is more focused on the producer role rather than the consumer role. Nonetheless, this term (peer-to-peer production) emphasises on production while the consumer role is probably neglected or undermined.

Many researchers have recognised the role of consumers as co-creators and therefore adopted an extreme discourse against corporate power by which they mobilised a language in their discussions against such business thinking injected by Prahalad and Ramaswamy (2001; 2004) in their theory of co-opting customers as a source of competitive advantage for firms. On this basis, many researchers found the discussion by Terranova (2000) fertile to develop their argument of consumer exploitation in opposition to consumer empowerment. Nonetheless, the role of the consumer as an integrator of resources (which is consistent with prosumption) or as a co-creator of value (i.e. S-D logic in the context of consumer culture rather than in the context of marketing of business) remain largely unexplored. Apart from series of works by Ritzer (2013) who recently started to turn attention to prosumption, negligence in the literature is particularly applicable to the role of the 'prosumer' as proposed by Toffler (1981).

This thesis adopts a balanced understanding of consumer power through a discursive understanding of consumer empowerment as drawn from Denegri-Knott et al. (2006) through a Foucauldian understanding of power in line with the series of works by Foucault (1977;1978;1981;1988). Thus, three main theoretical contributions can be addressed in line with reviewed and empirical research on the practices of prosumption in Instructables as discussed below:

9.3.1 An Empirical Demonstration of the Nature of Prosumption

Findings from Instructables contribute a rich body of knowledge by which the nature of prosumption can be demonstrated (contexts, multiple roles of prosumers, benefits of prosumption and types of prosumers). This work can be developed further but its value lies in its presentation as an empirical example on prosumption in line with Toffler (1981) who coined the term rather than the latest recapture of the meaning of prosumption as suggested by Ritzer (2013). While Ritzer (2013) attempts to propose consumers as constant prosumers and consequently label them as either (prosumers-as-consumers) or (prosumers-as-producers). But this conceptualisation by Ritzer (2013) is rather difficult to comprehend since the question is whether the essence of prosumption should be revised in terms of prosumers as part of consumers or vice versa. It is semantically difficult to think of all streams of consumption, traditional markets as practices of prosumption-as-production or consumption unless such argument is focused on the symbolic meanings and cultural perspectives of consumption or production. Evidences from Instructables illustrate the intensive nature of prosumption and this view into its nature help us to acknowledge prosumers as a group of consumers rather than think of the intensive practices by those individuals as either prosumption-as-consumption or prosumption-as-production.

This thesis is a response to calls for more real-life examples of consumption and production combined by consumers alone rather than as experiences in value co-created experiences managed by firms. Some academic scholars may find the theoretical suggestions presented in this thesis useful to their ongoing research projects. For example, some preliminary thinking in the rich nature of prosumption may help interested researchers to define their research projects on prosumption. Put simple, such potential research projects can refer to the demonstration of multiple manifestations of prosumption (material versus digital or both) and (individual versus collective as prosumption and co-prosumption).

There seems to be some theoretical confusion in terms of the possible manifestations of prosumption in marketing and consumer research. For example, some recent works (e.g. Fisher, 2015; Mosco, 2015) appear to make excessive linkage between potential manifestations of prosumption and the digital world. These works often refer to prosumption in situations of consumers' involvement in the digital arena of consumer's productivity. On this basis, Fisher (2015) refers to some manifestations of prosumption in terms of consumers' involvement such as writing and copywriting of adverts for companies in the internet. Similarly, Mosco (2015) refers to the uploading, downloading and archiving of files in the digital world as manifestations of prosumption. So, this once again raises questions about whether this kind of involvement by those online consumers should be regarded as co-creation (or supposedly as co-prosumption) since those consumers make minor participation perhaps unintentional if at all possible to assist such online firms.

There are tons of free business and marketing ideas in the digital space of the internet while it seems practically nearly impossible to act on the rise of consumer involvement in the internet or even have the human capacity to acknowledge such knowledge contribution by interested online firms. Also, it is not possible to know whether firms are principally interested

to recognise such intellectuality from consumers or whether those companies might regard such practices by online consumers as a kind of 'company hijack' similar to those practices in the case of 'brand hijack' as noted by Wipperfurth (2005).

Other researchers (e.g. Chu, 2010; Krieglsteiner, 2013; Ramnarain and Govender, 2013) also refer to users of YouTube, Wikipedia, Facebook and other participatory, social media and networking sites. Those researchers often theorise users of such sites as consumers of digital content or service-based products. Nonetheless, this raises questions about whether such practices by those online consumers is much more of digital consumption, co-creation or possibly a kind of overlapping contexts of co-creation and co-prosumption. Some scholars also frequently tie prosumption to situations of consumers' involvement as mere producers of digital products, other scholars also additionally tie prosumption to a collective manifestation of users in the internet. For example, Recuber (2012) investigates members' exercises in the internet as producers of digital collective memory within the context of two recent American disasters (the eleventh of September attacks and Hurricane Katrina). Recuber (2012) seemingly recognise the significance of prosumption as collective rather than an individual commemoration of memory by consumers in the internet.

Similar to Recuber (2012), Chen (2011) also recognise the significance of collective prosumption but she turns attention to a different practice of collectivism which occurs offline (i.e. in a physical event/landscape). Chen (2011) takes note of the practices by members of the Burning Man (an annual artistic gathering) as a manifestation of collective prosumption of art. Both Recuber (2012) and Chen (2011) enable us to think of diverse collective manifestations of prosumption in the digital and material/physical worlds respectively.

A researcher who plans to make an empirical investigation into practices of prosumers could refer to four theoretical boundaries to shape his/her own research: a digital and individual manifestation of prosumption, a digital and collective manifestation of prosumption, a material and individual manifestation of prosumption, and a material and collective manifestation of prosumption. An empirical investigation into a digital and individual manifestation of prosumption require researchers to observe practices of prosumers in the internet. Such potential project may restrain observations to the production of digital products by individual consumers in the internet (e.g. archiving and retrieval of personal files using cloud services). An empirical investigation into a digital and collective manifestation of prosumption require researchers to observe peer-to-peer prosumer behaviour in the internet (e.g. sharing of personal files in cloud sites, torrents, and hosting sites). However, there is a negligence of researchers' focus on material manifestations on individuals and groups of prosumers. A possible manifestation of material production by individual prosumers often occur in the context of DIY markets (e.g. designing and delivery of products/services). Lastly, a possible manifestation of material production by groups of prosumers is generally overlooked in comparison to other manifestations in the literature of prosumption.

Overall, this thesis, through the synthesis of some relevant literature and findings from Instructables, could help researchers to define the scope of their research projects on prosumption; the proposition of four manifestations (digital, material, individual and collective prosumption) enable researchers to set theoretical and practical boundaries into potential future research projects. This thesis also makes the proposition that prosumption may manifest as a convergence of both material and digital context of production. In fact, all of these three manifestations of prosumption is evident in the different practices by members in Instructables. Members from this community prosume material final products for their

individual consumption alongside their involvement with co-prosumption of a digital content in the community. Thus, a manifestation of material prosumption occurs (through the production of material desired products for members' consumption) in addition to a manifestation of digital prosumption (through the production of desired digital publication of members' experiences).

9.3.2 A Typology of Empowered Prosumers through Discursive Power Relations

Findings from Instructables demonstrates how members in this community act on variety of discursive practices from documentation and publication of projects, to incentivisation through games and rewards. Members who participate in Instructables follow a self-regulating process through self-disciplining and collective education. This means that every member in the community have to abide by the order of things in the community while also members engage in a system of ongoing teaching, learning and sharing (i.e. collective education). Thus, the totality of this ongoing system that is taking place in Instructables is the result of individuals subjectivation by the practices of the self while those individuals are also objectivised by institutional discourses and disciplinary power. This is consistent with a discursive model of power as drawn from Foucault (1977) and linked to consumer empowerment by Denegri-Knott et al. (2006). The work in Instructables can be then sustained, constituted and produced by self-disciplined individuals and a collective system of education.

Such prosumers and co-prosumers in Instructables are empowered through their discursive relationships of power. Put simply, those prosumers constitute a new knowledge (prosumer's knowledge) and a new consumer subjects (the prosumer) through their peer-to-peer and collective relationships. Most importantly, those members who abide by the nature of intensive work and commitment (or normalisation) taking place in the community not only

become as recognised members in the community. They also can be viewed as new subjects of empowered prosumers as ‘assemblers’, ‘modifiers’, ‘artists’ and ‘inventors’.

The recognition of such empowered categories of prosumers might contribute useful insights to the argument of consumer productivity in light of the distinction between the prosumer (or co-prosumer) role and the consumer co-creator role. On this basis, prosumption or co-prosumption can be argued as a form of discursive consumer empowerment versus consumer co-creation as a practice of consumer exploitation. For example, the recognition of prosumption as a multiple of discursive practices that empower consumers and constitute new consumer subjectivities from assemblers to modifiers, artists and inventors could enrich some critical perspectives regarding the overlapping roles of consumption and production offered by some scholars in marketing such as Cova and Dalli (2009) and Cova et al. (2011) or offered by scholars in other fields such as those perspectives in the field of sociology offered by Humphreys and Grayson (2008).

Most recently, Cova et al. (2015) look into the overlapping roles of consumption and production and raise the question of whether consumers are exploited or emancipated in their collaborations with companies. So, such theoretical distinction between prosumption and consumer co-creation might enrich the arguments presented by Cova et al. (2015) and offer solid support to their theory of the brand volunteering through unpaid consumers. ‘Brand volunteers’ as labelled by Cova et al. (2015) provide unpaid contributions through their co-creative roles of value with companies which may subjects consumers to exploitation. Likewise, Zwick et al. (2008) suggests that companies use the practice of value as a discourse of consumer empowerment while the authors argue that the true meaning of co-creation is consumers’ exploitation rather than empowerment. However, the distinction of prosumption from consumer co-creation in this thesis enable us to suggest that

companies might empower consumers as individuals but exploit them through collective participation. Prosumers are less likely if at all exploited by companies since they combine both consumption and production into their experiences. Nonetheless, co-prosumption with other peers could be an area of interest in terms of consumer exploitation but it is again an area of argument since co-prosumers use products for their own consumption through self-management rather than the management of businesses.

There are also potential cases of exploitation by a group of prosumers (i.e. owners/admins of a given community) who can offer online platforms for peer-to-peer prosumption such as driving traffic to the community and generating revenue from public advertising. But in this case one might argue that generating revenue through advertising in these communities aims to sustain the operational costs of the site rather than generating financial profits to a certain company such as the case proposed by Cova et al. (2015) in brand volunteering by unpaid consumers. The concept of consumer exploitation might remain a topic for argument since exploitation is complex in its nature.

So far the above discussions give some academic examples, from relevant literatures, which may theoretically benefit from the distinction of prosumption from consumer co-creation. Overall, this thesis offers a new perspective of consumer empowerment beyond traditional theories in marketing which focus on collective education to influence markets and society. The thesis furthers research and analysis in the areas of consumer productivity among and between consumers, and develops prosumption theory through offering a tighter conceptualisation of prosumption. The contributions highlighted above may allow scholars to better distinguish between and apply relevant terminology more precisely.

9.3.3 Consumers, Producers and Value: Useful Insights

The section makes a proposition which build in the contribution developed in the previous subsections as well as findings from the literature on consumer productivity. In this sense, the consumer role as a producer of value can be viewed in three ways: as a prosumer, as a co-creator, or as a hybrid of the two roles (with overlapping foci). Further, it is neither possible nor desirable to separate such roles precisely; unlike the term prosumption, the distinctions between prosumer and co-producer roles are likely to remain uneasily fuzzy and fluid, as social actors navigate multiple creative and productive social relations through digital culture. Nonetheless, some of the differences between prosumer and co-creator roles are proposed below in table 7. Thus, the expression prosumer is more relevant to consumers who foster use value production through the use of their skills and consumption experiences and co-prosumption of value is more likely among peers (i.e. prosumer-to-prosumer). The expression value co-creator is more relevant to consumers who participate with firms, usually at the request of the firm. Here the possibility of co-creation is more likely among unequal rather than peer partners (i.e. firm-to-consumer).

	The consumer as a 'prosumer'	The consumer as a 'co- creator'	Key related literature
Role of consumer	The consumer becomes a prosumer. The prosumer consumes resources (e.g. products, services) in order to produce his/her own value.	The consumer becomes a co-creator. The consumer participates as an assistant working with firms in order to determine customized value.	(Prahalad and Ramaswamy 2004; Prahalad and Ramaswamy 2000; Toffler 1981; Xie et al., 2008)
Consumer-firm interaction	Consumer's interaction with firms is not essential. The consumer may occasionally need to integrate professional components from firms.	Consumer's interaction with firms is essential. The consumer is typically required to participate as a co-partner with firms.	(Prahalad and Ramaswamy 2004; Xie et al., 2008)
Level of skill(s)	The outcome of prosumption usually	The outcome of co-creation usually	(Wolf and McQuitty 2011)

	The consumer as a 'prosumer'	The consumer as a 'co- creator'	Key related literature
	requires physical efforts (e.g. combining objects, assorting parts). All tasks are typically handled by the consumer.	requires less physical efforts. Some tasks are only handled to co-creators.	
Design and delivery of outcome	The prosumer is responsible for tasks of design and delivery of outcome.	The co-creator shares tasks of co-design and delivery of outcome with firms.	(Humphreys and Grayson, 2008)
Training of consumer	Training is self-driven. The consumer needs to acquire related skills to become a prosumer.	Training is firm-driven. The firm teach consumers required skills to become co-creators.	(Wolf and McQuitty, 2011)
Possibility of collaboration	More relevant to co-prosumption between peer partners such as firm-to-firm, and consumer-to-consumer.	More relevant to collaboration between unequal co-creators such as consumer-to-firm.	(Kozinets et al., 2008; Tapscott and Williams, 2006)
Meaning and determination of value	The consumer only makes and determines value.	The firm makes value propositions whereas the co-creator determines value.	(Vargo and Lusch, 2004)

Table 7 Some Differences Between Prosumer and Co-Creator Roles.

In some cases, the role of the prosumer may coincide with the role of the co-creator. This is particularly possible in online contexts such as social media sites including Facebook and e-commerce sites such as Amazon. This is also consistent with an understanding of production in line with theories of cultural consumption in society other than the marketplace such as education, healthcare and public services. Consumers can capitalise on these online resources such as Facebook as cultural co-prosumers of value among themselves (they can produce value-in-use for their own needs), but at the same time their participation takes place through a professional firm's platform (and, thus, produces exchange value for the firm). For example, such peer-to-peer participation in Facebook and Myspace can be understood as a practice of cultural co-prosumption (consumer-centred or collective co-

production of value). But such participation also entails another form of online co-creation of value with the owners of these sites who seek business profits.

9.4 Managerial Implications

This section highlights several managerial contributions which may benefit marketing managers in businesses and non-profit organisations on the basis of the findings discussed in this thesis. At the level of the mainstream consumer markets, a refined understanding of prosumption help marketing managers to use commercial products as facilitators of prosumption rather than involving consumers as co-creators of value with firms. This often meet the expectations of prosumers who require a high degree of flexibility in the final products they produce for their consumption (e.g. materials/components, services, design). Those prosumers often do not accept the most customisable products available to them similar to other mainstream consumers.

Recently, some leading businesses in mainstream consumer markets have already started to fragment their commercial products in such a way that facilitate prosumption and meet the expectations of prosumers. Ikea (a Swedish retail furniture company) is a good example of businesses which now enable consumers to buy products as disassembled components from the company's retail shops. Ikea's consumers may assemble furniture as parts to be assembled (e.g. study desk, table) or alternatively buy Ikea's products (e.g. legs, tops, desk frames, screws) as disassembled components for different final products designed and produced by consumers. A prosumer, for instance, may design and build a table that suits him using finished materials from Ikea rather than choosing to assemble parts from Ikea as often described in their website:

“see any table tops that suit you? And table legs? The secret is that you don’t have to settle on the examples shown below. You can combine your choice of top and legs or other supports. Most combinations are possible and you get to design a table that really suits you.” (Ikea, 2015).

Thus, Ikea’s consumers may not only assemble products as per instructions devised by the company, but those consumers can also become prosumers and use material components from Ikea to design and produce final products for multiple of their individual projects.

Marketing managers in businesses could also devise a marketing strategy which respond to both demands of co-creator consumers and prosumers. Unlike co-creators, prosumers would not expect firms to instruct them or take parts in the design and use of commercial products in the practice of prosumption. Therefore, devising a marketing strategy which responds to the expectations of prosumers create some competitive advantages to firms operating in the mainstream consumer markets. The use of commercial products/professional services as facilitators of prosumption means that firms can expand the scope of their businesses and respond to the rise of prosumers as noted in the literature (e.g. Ritzer and Jurgenson, 2010). Furthermore, firms can minimise resources required to support customers before and after sales since prosumers choose to take full responsibility for final products.

Despite the above discussion, marketing managers should note that devising a marketing strategy which respond to the demands of prosumers is not equivalent to giving customers a high degree of customisability over commercial products (i.e. personalisation of colour, shape or other components of products). Customisability means that customers will continue to use firms’ resources based on the instructions and value propositions by firms.

Nonetheless, prosumers who use commercial products as material components in such a way that suits their individual projects may entail challenges to firms in terms of products management. Prosumers may offer competitive versions of products to those assembled and manufactured by firms. Furthermore, some consumers may assume control over commercial products such as 'brand hijack' as noted by Wipperfurth (2005). Consequently, prosumers may subject the images of commercial products to potential distortion which is not always consistent with the image advertised by marketing managers.

In addition to the use of commercial products as facilitators of prosumption, marketing managers can also develop peer-to-peer relationships among prosumers who use commercial products/professional services. A refined understanding of prosumption may help firms to promote peer-to-peer support among prosumers since consumers of material components can inspire each other in terms of the potential use of different products based on consumers' experiences rather than the propositions by firms. The managerial implications in this thesis are also relevant to social and environmental shareholders. Individuals who are sponsored by a public institution or a government can work together as prosumers to achieve and sustain common social goals. Some prosumer projects also help to achieve common environmental goals. So, public consumer agencies can promote different range of products as some friendly alternatives which can help interested prosumers to make re-use of expired products for different purposes other than those proposed by the companies.

9.5 Limitations and Future Research

There are some limitations on the findings reported in this thesis. Data collection relies on a single online community. Instructables is one of the prime spaces for prosumers in the internet since this community hosts a great number of prosumers alongside variety of their individual projects. The diversity of projects in Instructables makes this community an appropriate fieldwork to understand prosumer behaviour and the empowering potential of prosumption. Overall, this community satisfies the criteria required for a netnographic fieldwork as discussed in the methodology chapter. But there are a growing number of communities which focus on similar projects documented by prosumers. For example, Dorkbot.org, Adafruit.com, Ravelry.com and Craftster.com are some of the other communities in the internet which can be considered for empirical research on prosumption. Such communities may offer appropriate fieldworks for future netnographic research within different sets of research objectives.

A community such as Dorkbot.org, for instance, would be more relevant to netnographic research which focuses on a particular group of prosumers other than members participating in Instructables. Dorkbot.org sponsor prosumers (e.g. fire artists and electronics enthusiasts) who produce artistic projects. Hence, Dorkbot.org pay close attention to a specific practice of prosumption which is consistent with the production of artistic products such as those produced by a group of prosumers named as 'designers' in Instructables. So, a potential future study on Dorkbot.org would develop a better understanding of this type of prosumption facilitated by designers and how they experience empowerment in this community. Likewise, similar future studies could be also developed to offer a better understanding of the other groups of prosumers (i.e. assemblers, modifiers, inventors).

Future studies on prosumption could also consider a combination of the above mentioned communities (i.e. Dorkbot.org, Adafruit.com, Ravelry.com and Craftster.com) or/and other communities to offer validations of the findings discussed in this thesis or identify similarities and differences of these communities towards a better understanding of prosumption. Findings reported in this thesis offer a typology of prosumers using data collected from Instructables while future work can be developed in relation to prosumption practices with a view to developing a typology of prosumption communities.

Another limitation perhaps is implied in the netnographic method. Kozinets (2010) outlines and give details regarding the key stages for netnographic research from planning to data collection and analysis to ethics and evaluation of netnographic studies. Nonetheless, Kozinets guide to the conduct of netnography (2010) may need some updates that would advance the method of netnography in line with the rapid development of the internet and the widespread use of netnography by many researchers and postgraduate students in the UK. Indeed, Kozinets (2010) in his published book on doing ethnographic research online suggests a number of possibilities for the growth and adaptation of netnography such as the conduct of netnography on social networking sites, blogs, and virtual worlds. This implies that every netnographic research given its particular culture/community could offer some insightful possibilities into the advancement and adaptation of netnography.

There are various structures for communities in the internet which could be used for the conduct of netnography. Nonetheless, it appears that researchers often select communities which host 'online forums' more than other forms of computer-mediated communications (e.g. personal websites, chat rooms, virtual worlds, blogs, social media and networking sites) (e.g. Kozinets, 2002; 2006; 2008; Nelson and Otness, 2005). The frequent use of online forums in netnographic research often reflects the active participation and richness of data

contributed by members in these public sites. Also, the way in which these public forums get managed often enable researchers to find data relevant to their research projects. Furthermore, this popularity of using online forums in netnographic studies may reflect an old time when browsers of the internet (or consumers) used to manage their discussions in public online forums.

Future studies on prosumption could use different types of online communities. Despite the methodological advantages of using online public forums in netnographic research, there are some methodological challenges which often hurdle the entrée and collection of data from a given online forum. It appears that granting access, in line with academic requirements, to public online forums is increasingly becoming a challenging job as the case in the data collection for the purpose of this project. There are certainly other challenges to novice researchers who are interested in netnographic work especially with communities such as Instructables which are hosted by online forums. For example, Kozinets (2010) highlights some challenges related to how researches approach public online forums and how participants perceive research projects. Kozinets (2010) remind researchers to take a careful approach to place research requests in public forums while he also warn researchers from the misperception of research projects as a way of public mind control. Others such as Langer and Beckman (2005), Salzmann-Erikson and Eriksson (2012) recommend that researchers remain covert in sensitive research projects which is again help researchers to avoid the potential problems with granting research access to such public forums.

Perhaps it is unfortunate that participants in many public online forums often sign an agreement (i.e. electronic-based contract version) which give ownership of participants' contributions to the administrators of the website. Public online forums are often owned by few administrators (e.g. moderatos) who frequently use the forums to generate traffic and

revenue from online advertising (e.g. google ads). So, it is perhaps common that research requests in these forums frequently get rejected/blocked or ignored by administrators of the website. Luckily, members in Instructables similar to members in large communities can own, manage, modify and delete their individual projects from the community. This means that members in Instructables can protect their individual copyrights alongside the administrators of the site which is not the case in most online forums.

The rapid rise of other forms of computer-mediated communications such as social media and networking sites may refer to how today's consumers can use other alternative internet-based structures for their communities. This might be an opportunity for researchers who are interested in the method of netnography. Perhaps it would be practically easier to communicate with participants in communities hosted by popular sites such as Facebook, YouTube and social media networks. Another limitation in this study is that data collection relies mostly on English speaking male participants in the ages between eighteen and fifty years old. English speaking male participants represent the active majority in Instructables and match the language criteria needed for data collection and analysis. But this means few if any contributions from non-English speaking, females, adolescents under eighteen and elderly members in Instructables were included in this study. Based on preliminary observations in Instructables, there seems to be a growing interest of prosumption among those segments of prosumers.

Males who are not natives or speakers of English are overlooked in the existent empirical studies in prosumption. It appears that most of the published empirical work on prosumption focuses on participants from English speaking countries. For example, several key studies on prosumption include only participants from English speaking countries (e.g. Wolf and McQuitty, 2011; Xie et al., 2008). However, many participants in Instructables are originally

from non-English speaking countries notably many European consumers from countries such as Portugal and Italy and many Latin American consumers from Mexico and Argentina. Many of those non-English speaking members in Instructables document and publish their projects in their own languages or use online translation services (e.g. google translate, online dictionaries) to make translations from their native languages to English.

Future studies could make comparisons between prosumers in English speaking/European countries and prosumers in non-English speaking/non-Western countries. Such comparisons will challenge the dominant perspective that prosumption is most popular in English speaking or Western countries since it is often associated with the industrial/technological developments in these countries. For example, a potential study may make comparisons of consumers' interests to become prosumers for some of their goods and services. So a potential study might offer a better understanding of prosumption in terms of prosumers' access to resources in different countries. For example, there might be some variations in terms of prosumers access to operand resources (e.g. wood, second hand materials, physical spaces) or/and operant resources (e.g. spaces/workshops, special training) required for prosumers' individual projects.

Future studies on prosumption could also focus on those segment of prosumers which consequently correspond with the recent call adopted by some references in the consumer literature particularly in topics such as empowerment of female prosumers (e.g. Wolf et al., 2015) or the awareness of youngster prosumers in terms of their involvement with programs supported by firms (e.g. Ziemba et al., 2013). It seems that both segment of prosumers females and adolescents are becoming the focus of existent yet growing literature of prosumption. In comparison to these few references which concentrate on women and adolescents, elderly people are seemingly overlooked in the prosumption literature. So,

future research projects could examine the empowering potential of prosumption among those prosumers or make comparisons of the similarities and differences between males and females practices of prosumption.

Future studies could focus on the roles of female prosumers since there is recently a correlation of prosumption and empowerment literatures (e.g. Wolf et al., 2015). A potential research project could attempt to explore the extent to which prosumption empower different segments of prosumers. Furthermore, future research can focus on how peer-to-peer prosumption manifests in knowledge-based economies. For example, it would be worth exploring how prosumers gather online and use their immaterial labour to become prosumers of use value in contexts such as education, health and politics.

Also, it has been shown that prosumer roles may overlap with consumer co-creation roles. Thus, it would be relevant to explore whether and how consumers' roles as prosumers overlap with their roles as co-creators of value within popular social media sites, given that this work lays the foundation for future studies on prosumption. Finally, future studies could look to distinguish between other resonant and yet confusing terminology (e.g., craft consumption, democratising innovation, mass collaboration, and collective innovation) through additional empirical work in this area of consumer research. Finally, the following are only proposed as definitions/criteria for reference by marketing practitioners and executive managers:

- A business creator: a manufacturing firm (or their marketing agent) who can access and process natural, primary and secondary resources to create and market items, components, parts, professional services and products (e.g. Home Depot).

- A co-creator consumer (not a customiser): a consumer who assists a manufacturing firm (or their marketing agent) in the delivery and evaluation of products to herself and other consumers (e.g. consumers of Pizza Hut).
- An individual prosumer: an integrator of resources who can combine the consumer and the producer roles to create final products for his consumption or others as non-market alternatives to those sold by businesses (e.g. consumers of Ikea, consumers of Home).
- A business prosumer: a company which can create a knowledge based system for the prosumption and co-prosumption by its network(s) of digital co-prosumers and co-creators (e.g. YouTube, Facebook and Twitter).

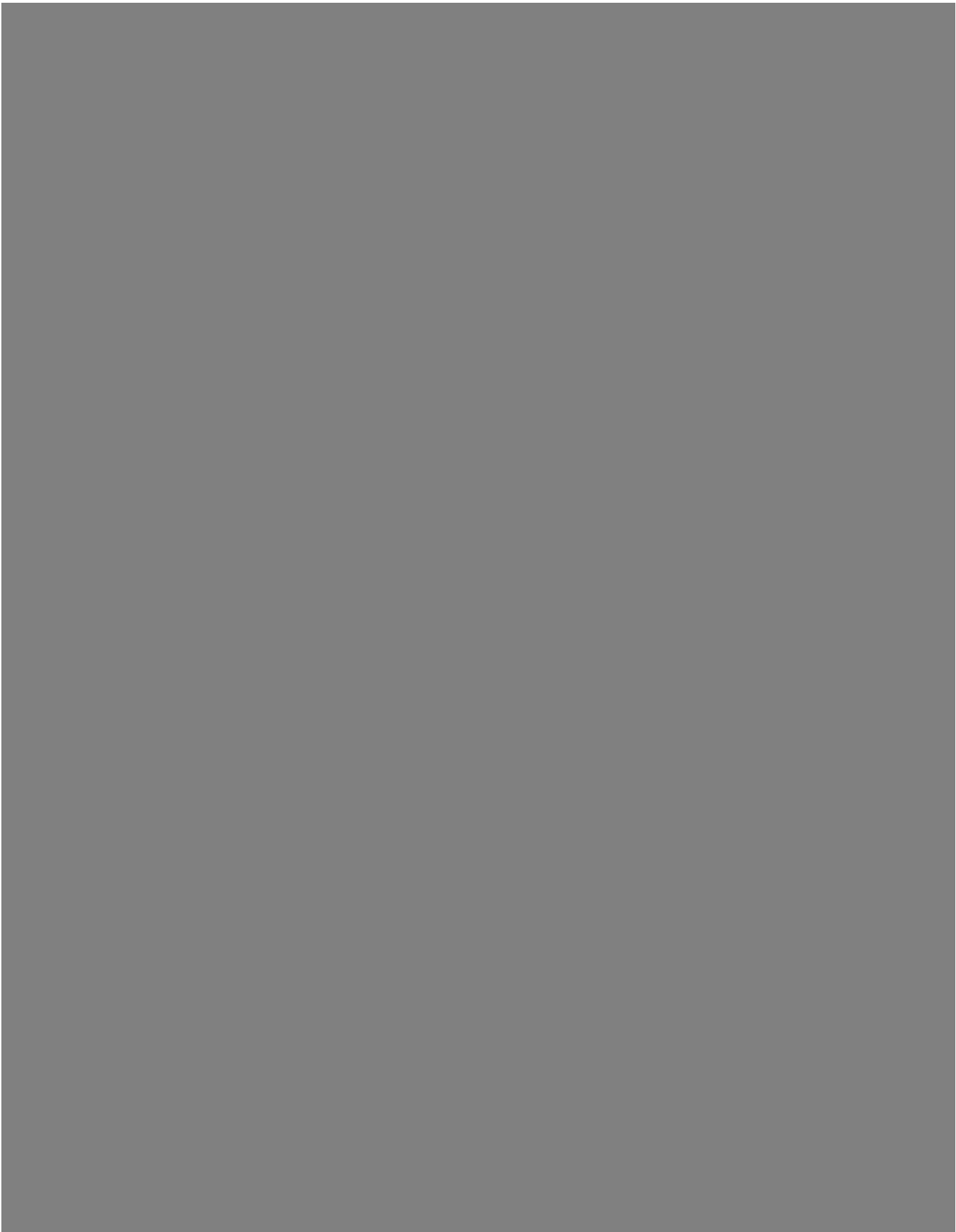
So the above definitions might help articulate the differences in terms of how consumers and producers co-create or co-prosume value among and between each other. Nonetheless, it must be noted there are many structures of business models so it is perhaps neither possible or desirable to propose a mutually exclusive list of definitions and terminology in the literature of consumer productivity.

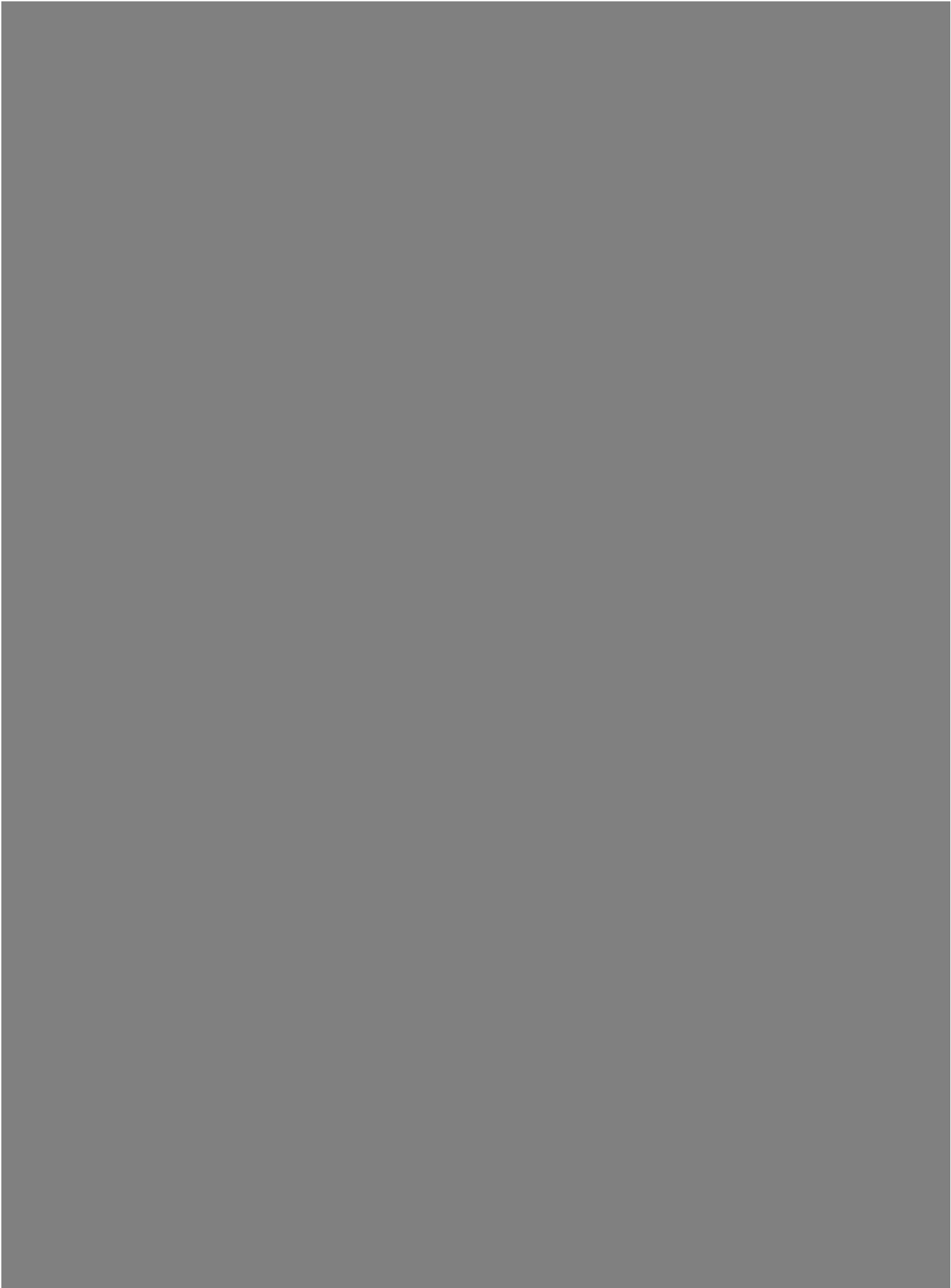
9.6 Summary

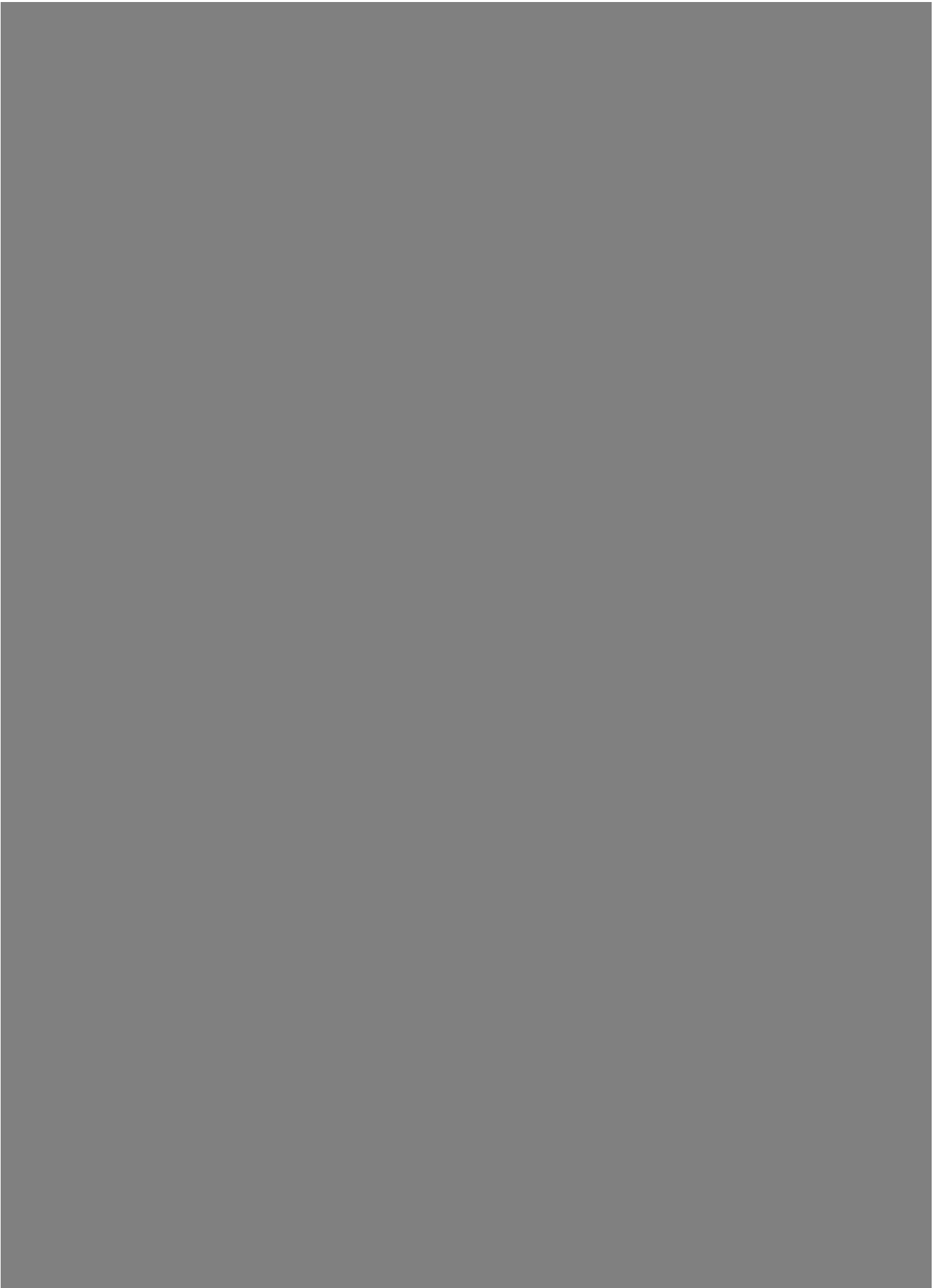
This thesis explores the nature of an emerging practice known as 'prosumption', and interrogate its potential as a practice which empowers consumers in an online community named Instructables. This community hosts diverse individual projects documented and uploaded by members within broad categories from technology to living to DIY and homemade projects. This chapter concludes the thesis with some theoretical, methodological, and managerial contributions alongside limitations of the present study and recommendation for future research.

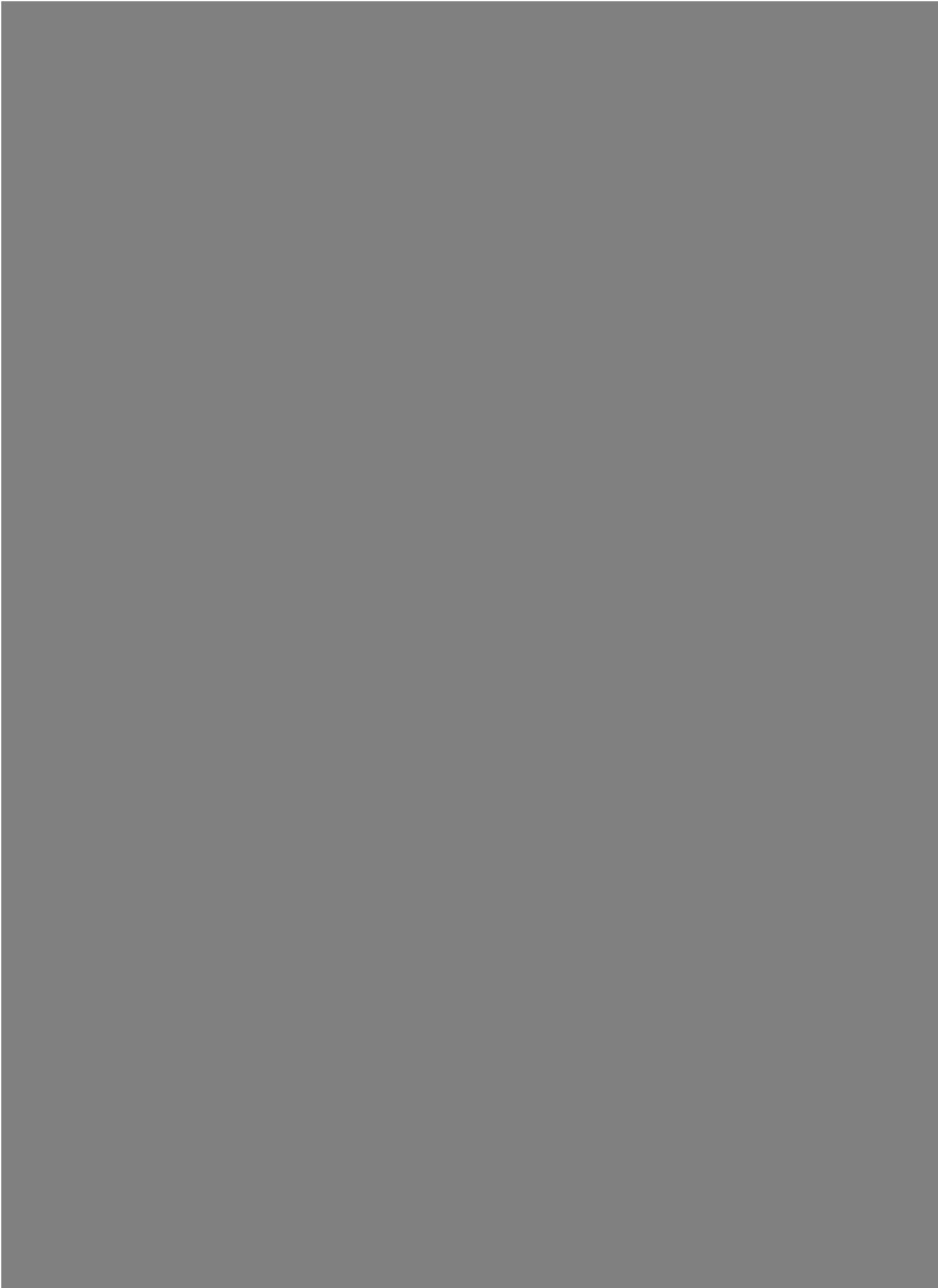
The theoretical distinction of prosumption from similar practices contribute some critical perspectives regarding the overlapping roles of consumers and producers in the literatures of marketing and consumer research. This thesis also makes a number of theoretical propositions which could help researchers to identify the scope of their research projects on prosumption and prosumer behaviour from a combination of four manifestations (digital, material, individual and collective prosumption). Furthermore, this thesis offers a new perspective of prosumer empowerment as peer-to-peer education. Such new theory of prosumer empowerment also reflects views of consumers rather than view of commercial suppliers who often define consumer empowerment in terms of producers' priorities more than the priorities of consumers.

This thesis also makes several contributions which might benefit marketing managers in businesses and non-profit organisations. A refined understanding of prosumption implies that marketing managers can use commercial products as facilitators of prosumption rather than involving all of their consumers as co-creators of value. The use of commercial products as facilitators of prosumption most meet the expectations of prosumers who often require a high degree of flexibility in the final products they produce for their consumption. Marketing managers can also encourage peer-to-peer relationships among prosumers who make use of commercial products/professional services. Peer-to-peer relationships offers a competitive advantage to firms in terms of support and training. There also important contributions to social and environmental organisations.

















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