

MA Major Research Paper

How Digital Media Entrepreneurs Talk and Think about Value Creation:
A Study of Commodification

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Abstract

Recent scholarship in the discipline of the political economy of communications, specifically on the topic of digital media, has called for further incorporation of theory from other fields. This study takes up this line of reasoning and contributes to the literature by incorporating the concept of customer value from marketing studies and the concept of opportunity recognition from entrepreneurial studies to examine the process of commodification. Drawing upon the customer value framework devised by Brock Smith and Mark Colgate, this study employs qualitative research to examine how entrepreneurs at the Ryerson Digital Media Zone talk about value. The results of this study demonstrate that the digital media entrepreneurs interviewed do in fact favour certain values over others lending credence to entrepreneurial studies theory that opportunity recognition is a result of specific cognitive frameworks and political economy theory that social and institutional policy and practices impact on media content and behaviour.

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Introduction

In a 2009 speech, Ryerson University President Sheldon Levy espoused his conviction that the city of Toronto and Ryerson should be leaders in the digital economy both nationally and internationally. “Our goal is to devise made-in-Toronto solutions for i-banking, i-business, i-news, i-industry, i-medicine, and i-everything”¹. This speech was part of an ongoing campaign to make Ryerson University an increasing integral part of downtown Toronto; “We have an opportunity to define the Ryerson University of the future. And, with it, the City we can build as part of our campus plan”².

Officially opened on April 7, 2010, Ryerson University’s Digital Media Zone (DMZ) has been touted as an extension of Levy’s vision to give the University a prominent position within the downtown core and to foster growth within the digital economy (Ryerson University, 2010). Overlooking the square at Yonge and Dundas, the DMZ is a 6400 square foot business incubator for Ryerson students and alumni who are developing new digital media businesses and products. The DMZ is a place where young adults are provided with the environment and tools to meet with mentors, industry, investors and other innovators in order to develop marketable ideas (Canadian News Wire, 2010).

As just mentioned, the DMZ is a business incubator. Business incubators are centres created by organizations, in this instance Ryerson University, with the expressed purpose of fostering entrepreneurship and new firm formation, and like universities they are a known site of knowledge transfers, often seen specifically in high-technology communities (Cooper & Park, 2008). Incubators offer the opportunity for individuals to engage with mentors and informal

¹ Speech to the Empire Club of Canada, March 5, 2009

² Speech to the Canadian Club of Toronto, March 8, 2006

industry networks that are vital to fostering entrepreneurship (Ozgen & Baron, 2007). “The Digital Media Zone is about coming up with great ideas, but taking it a step further and executing those ideas to create amazing businesses” (Chris Nguyen, as quoted in Ryerson University, 2010).

A business incubator like the DMZ where media and communications technologies are being developed and applied to create value is a result of the influences and decisions of numerous social systems and institutions, such as Ryerson University. One discipline that can shed light on such a subject is political economy, a discipline that “addresses the nature of the relationship between media and communications systems on the one hand and the broader social structure of society” and “how ownership, support mechanisms and government policies influence media behaviour and content” (McChesney, 2000: 110). At its root, political economy is often primarily concerned with studying *capitalism* as a social system of production (Wasko, 2004). Those who work within the discipline of political economy of communications pursue the study of capitalism through approaches such as those that Mosco (1996) refers to as decentring communications systems (71). In this context, decentring communications systems is achieved by viewing them as integral to fundamental economic, political, social and cultural structures as opposed to placing them at the center of such structures (ibid).

The discipline of political economy of communications has set itself apart from other disciplines of communications and media studies in that it approaches the subject from a critical position (Meehan, 1999). The study of digital media is no exception to this as there is an opportunity to incorporate an even greater emphasis on Critical Theory in political economic analysis (Fuchs, 2009). This can help avoid research from becoming too celebratory, an issue

that Dovey (2008) observes in other disciplines. “We have an obligation to avoid the tendency in the rhetorics and excitements of new media that assume that we somehow live in a post scarcity world where capital, technology and software are somehow infinitely available” (Dovey, 2008: 251).

This study takes up Dovey (2008) and Fuchs’ (2009) call for critical research on digital media, through an examination of the relationship between entrepreneurs in the Ryerson Digital Media Zone and the broad social structures and institutions that affect them. Specifically, I am exploring the capitalist process of commodification, drawing on the concept of customer value and applying it to entrepreneurial opportunity recognition, which will be explained shortly. Commodification is “the way capitalism carries out its objective of accumulating capital or realizing value through the transformation of use values into exchange values” and is an area of great interest and theoretical importance within the political economy of communications (Mosco, 1996: 140). However, one barrier to performing a political economic analysis of the commodification process at the DMZ is that political economy is conventionally concerned with macro analysis (Wasko, 2004: 310). In contrast, the activities of the entrepreneurs operating within the DMZ are being carried out on a micro level. To bridge this gap I follow Mansell’s (2004) assertion that it is necessary for political economy to draw on other fields of study in order to “offer some assistance and provide a complement to the political economy of media and communications tradition” (99).

The particular fields that have been chosen to inform this political economic analysis are marketing studies and entrepreneurial studies. From marketing studies I draw upon the concept of customer value, and the practical customer value framework developed by Smith and Colgate

(2007). Customer value is the value that a customer perceives in a product (Woodruff, 1997). Or to be more specific, it all the various different values that a customer perceives in a product, that can fall into the classification of either use or exchange value. Smith and Colgate (2007) have devised a working framework for mapping and analyzing these values, which they identify as functional, experiential, symbolic and cost value (10). These values are at the centre of the commodification process as they are transformed from use to exchange value, even though this is only implicit within the customer value literature.

From the field of entrepreneurial studies, I draw upon the process of opportunity recognition and the subfield of entrepreneurial cognition, in order to shed light on both the commodification process and customer value creation at the DMZ. For evolutionary economics and cognitive science scholars in entrepreneurial studies, the area of study is generally defined as “the scholarly examination of how, by whom, and with what affects opportunities to create future goods and services are discovered, evaluated and exploited” (Shane & Venkataraman, 2000: 218). An entrepreneurial opportunity is brought about by the formation of new means, ends, or means-ends relationships and contain the potential to alter the terms of economic exchange (Eckhardt & Shane, 2003: 336). This is the commodification process at its most basic level, as the exploitation of an opportunity is the generation of profit from the opportunity (Shane & Venkataraman, 2000: 223). Entrepreneurial cognition is defined as “the knowledge structures that people use to make assessments, judgements or decisions involving opportunity evaluation and venture creation and growth” (Mitchell, Busenitz et al., 2002: 97). Research in this field has provided evidence that entrepreneurs view opportunity based on institutional environment (Lim, Morse et al., 2010), knowledge differences based on learning asymmetries (Corbett, 2007), social sources of information (Ozgen & Baron, 2007) and cross cultural cognitive scripts

(Mitchell, Smith et al., 2000) among other findings. The role that society and institutions play in developing these cognitive structures in entrepreneurs can be seen in part as to how society and individual entrepreneurs (in this case digital media entrepreneurs) engaging in the key capitalist process of commodification mutually constitute the structures of society and of entrepreneurship.

In triangulating these three fields of political economy of communications, marketing studies and entrepreneurship studies, I am working to demonstrate how commodification is integrated into the process of entrepreneurial innovation through examining how entrepreneurs talk about value creation. Undertaking field research at the Ryerson Digital Media Zone, consisting primarily of qualitative interviews with entrepreneurs operating within it, this study examines how and to what extent customer values have been identified in products being developed and commodified. This is accomplished through applying the results of the interviews to Smith and Colgate's (2007) practical customer value framework. Research reported here has implications for all three fields of inquiry, as well as practical implications for digital media entrepreneurs. For political economy of communications scholars, it reinforces the need to apply complementary theory and research from other fields to strengthen analysis at the macro level through examining the micro-foundations of socio-economic processes, in this case commodification. As well, I aim to illustrate how commodification is a central yet often unmentioned part of the entrepreneurial and customer value creation processes. For marketing studies, this paper seeks to theorize how customer value is created in an entrepreneurial endeavour and demonstrate that Smith and Colgate's (2007) practical customer value framework is applicable to the study of entrepreneurial endeavours. Finally, for entrepreneurship studies, I intend to provide evidence that supports current theory regarding entrepreneurial cognition.

Literature Reviews and Theorization

Political Economy of Digital Media

There are many valid approaches to political economic analysis within the field of communications studies. These include historical analysis, media and industry analysis, globalization studies, media-state analysis and examination of alternative forms and processes of communications (Wasko, 2004). This paper follows Mosco's (1996) approach, which adopts a primarily Marxian perspective (70). He identifies three specific starting points for political economic analysis: commodification, spatialization and structuration (ibid: 138). Spatialization, a term which Mosco (ibid) credits to Henri Lefebvre (1979), is "the process of overcoming the constraints of time and space in social life" (ibid: 173). Structuration is "a process by which structures are constituted out of human agency" (ibid: 212). Commodification is "the process of transforming use values into exchange values" (ibid: 141). For this paper, I have chosen to focus primarily on commodification, however in doing so I do not mean to diminish the validity of any other approach.

Commodification

In examining the process of commodification, it is typical of political economists to draw upon Marx's book *Capital*, this "most explicit representation of capitalistic production" (Mosco, 1996: 141). As previously stated, "commodification is the process of transforming use values into exchange values" (Mosco, 1996: 141). This process coincides with the extraction of surplus value from labour, which is the difference between the price a commodity is sold for and the cost of labour (ibid: 142). Commodities arise from any and all needs, physical or cultural, both

physical and socially constituted (Marx, 1976: 125). There are two significant dimensions to the commodification of media: the media and communications processes contribute to the larger process of the commodification of the economy, and social commodification processes penetrate media so that commodification influences the social practice of communication (Mosco, 1996: 142). McChesney (2000) contends that these dimensions are the central concerns of the political economy of communications.

Political economists have identified several ways in which commodification occurs in the production and capitalization of communications. These forms of commodification include the commodification of content, the commodification of labour and the commodification of audiences. While each of these forms will be discussed separately, there is not always a clear line differentiating one form of commodification from another. The commodification of content is the most straightforward, involving the application of exchange value to content and the meanings derived from that content (Mosco, 1996: 147). The commodification of labour involves extracting surplus value for a product from the exploitation of labour, surplus value being the difference between total value of a product and the cost of all labour involved with its production (ibid: 142). The commodification of audiences involves profiting from providing access to users for other parties through means such as advertising and access to information about users to other parties (ibid: 148-153). These three forms of commodification are not the only forms; however they are three which are most observable when examining digital media and are therefore emphasized in this connection.

Commodification of Content

“The generally tendency in communications research has been to concentrate on the content as commodity and, by extension, to identify the connections between the commodity status of the content and its meaning” (Mosco, 1996: 147). This inclination to focus on the commodification of content is often concerned with the relationship between ideology and the process of commodification, which many political economists have studied in the area of communications (see Baudrillard, 1981; Herman & Chomsky, 2002). Ideology, in simplest terms, is an instrument of society that aims to direct the labour and commodification processes (Althusser, 1971: 133). Media serve “to amuse, entertain, and inform, and to inoculate individuals with the values, beliefs, and codes of behaviour that will integrate them into the institutional structures of the larger society” (Herman & Chomsky, 1988: 1). Yet, as Mosco (1996) notes, ideology is fully integrated and naturalized into the commodification process.

Within digital media a dominant ideological strain is that digital media are democratizing force (Fuchs, 2009). While digital media present both producers and consumers with a wide array of ways in which in which one can voice an opinion, this is not necessarily empowering. “The degree of participation in the media not only concerns the availability of production and circulation technologies, but also how visible information is, how much attention it gains, how much difference it makes” (ibid: 83). Looking specifically at social media, Fuchs finds that while these applications sell the ideology of individual creativity, they also mask the reality that this creativity does not relate to the power structures that influence and control the medium, but rather drive capital to the medium through appeals to individuals’ competitive

nature; “The ideology of individualization drives user demand, which allows the commodification of audiences that yields profit” (ibid: 84).

Commodification of Labour

The commodification process typically begins with capital’s exploitation of labour power through the forcing of labour into a social relationship where labour itself become commodified (Mosco, 1996: 142). In digital media, this process of exploitation is one of mental labour, what Fuchs (2010) refers to as knowledge labour. “Knowledge labour is labour that produces and distributes information, communication, social relationships, affects, and information and communication technologies” (ibid: 141). He identifies several types of knowledge workers, both direct and indirect. Direct knowledge workers include employed and self employed labour.

Fuchs (2010) draws upon Hardt and Negri’s (2000, 2005) argument that knowledge is a productive force produced by corporations but also in everyday life by a vast exploited class referred to as the multitude. Within the multitude, Fuchs (2010) identifies several subclasses who are exploited in specific ways; these are traditional industrial workers, knowledge workers, house workers, the unemployed, migrant workers, retirees, students and precarious workers (142-143). These subclasses are not fixed but rather are dynamic and individuals can be a member of more than one subclass at a time (ibid: 144). Knowledge exists as a product of society and history, and exists as the result of the collective efforts of many as opposed to one individual. Because this knowledge is collective, it is not owned by any one individual, and often exists without the collective holding or exerting any ownership rights. This allows for capitalists to appropriate and profit from this knowledge freely, as it is considered to be public knowledge that can be used for any purpose (ibid).

While labour is a tool of capitalism, knowledge labour for digital media can also work to undermine capital accumulation (Fuchs, 2009: 77; Mosco, 2009). For example, capitalists often have difficulty controlling digital media content, as it is diffused over networks which can have varying levels of security (Fuchs, 2009: 76). Digital media is intangible, making it easy to replicate thus undermining the property value of the specific medium (ibid). The networks that transmit digital media by their very nature negate the ability of individuals to maintain control and ownership of what is being transmitted (ibid). In addition to this, digital media have a relatively low cost of production for individuals but at the same time the immaterial labour³ necessary to produce digital media requires a higher educated workforce, which is increasingly unwilling to cede its labour power for exploitation (Mosco, 2009: 120).

Numerous scholars in media studies have pointed to non-profit gifts and the gift economies that have arisen in digital media as a viable alternative to capitalism and a vital form of knowledge transfer (see Benkler, 2006; Ito, 2008 Kelty, 2008). It should be noted though that only digital media that is given away without cost or any sort of advertising attached are truly non-commodified (Fuchs, 2009: 80). A large portion of what has been identified as the gift economy is actually capitalist endeavours that attach advertisement to the supposed gifts, the website YouTube would be one example of this (Fuchs, 2010: 147). Coleman and Dyer-Witheford (2007) argue that digital media production in many situations, such as Massively-Multiplayer Online Games, is an example of a complex hybrid of commodity and gift economy where capitalists profit from a digital environment that is effectively controlled by the societies that inhabit them.

³ Immaterial labour here refers to informational labour, or knowledge labour

Commodification of Audiences

Another form of commodification that is observed in digital media is the commodification of audiences. Fuchs (2009; 2010), among others, has stated that within digital media, Smythe's (2006[1981]) concept of the audience commodity has achieved its logical evolution. Smythe argues that the principal commodities produced by mass media companies are audiences. "This is the concrete product which is used to accomplish the economic and political tasks which are the reason for the existence of the commercial mass media" (2006[1981]: 256). Advertisers buy the service of audiences with predictable specifications for a specific time in a specific market. Collectively these audiences are commodities (ibid: 257). Building on Smythe's theory of the audience commodity, Mosco (1996) notes that it is necessary for capital to constantly and actively construct audiences, but at the same time "both audiences and labour construct themselves by deciding, within a social field whose terms of engagement are primarily set by capital, how to activate their audience and labour power" (149). Audiences of all media, digital media included, have the choice to either watch or not watch.

Following from Smythe's theory, Meehan (1984) has put forth an additional theorization, that of the ratings commodity. Focusing research on A.C. Nelson Company, she finds that "ratings are produced at a particular juncture by a single company- like any other company in any industry at any point in time- that seeks to maximize its profits and minimize its cost" (ibid: 223). In digital media, the ratings commodity has now become integrated into the operations of numerous digital media firms themselves. Firms such as Google and Yahoo employ analytical software, known as web analytics to track digital ratings. As Simon (2005) notes, this digital software that tracks audiences and users, can be a form of Foucault's (1977) panopticism. The representation of the audience that is produced through digital media acts to create a virtual

identity that can be exploited, and enacts self-discipline even while not sensing that one is under surveillance (Simon, 2005: 16-17). In this sense, the rating commodification does not just take over for the audience commodity, but it reconstructs the audience digitally as a rating. Mosco (1996) refers to the increasingly cybernetic quality of the ratings commodity. "Ratings are cybernetic commodities because they are constituted as commodities in the process of contributing to commodity production" (ibid: 151). Ratings, data mining and all other forms of web analytics are the commodification of data which exist for the sole purpose of creating a commodity of other objects.

One of the key features of digital media as opposed to more traditional forms is that it is often interactive, allowing for the audience to engage in some form of two way communication. Cover (2006) believes that this interaction, or even the illusion of participation, is a compelling lure for an audience which allows individuals to capitalize on them, though this doesn't necessitate the intention of increased profitability (152). However, Cover notes while this illusion of interaction is often created, the actual control over narrative is often maintained by the producer to varying degrees.

Fuchs (2009) agrees with these assessments of the audience commodity in digital media. He adds the further claim that on top of reducing the audience to a digital footprint, digital media involves user generated content, making the active producers on an individual level rather than passive ones (82). While some, such as Bruns (2009) have seen the rise of user generated content as a strong opportunity for a stronger public sphere, Fuchs (2009) is less optimistic; user generated content "does not signify a democratization of the media towards participatory systems, but the total commodification of human creativity" (82). While he does acknowledge

that there is an opening for collective political projects in non-profit, open-source digital platforms, the dominant forms of digital media produce commodified social relationships.

Examining the Commodification Process

Central to the philosophic approach to political economy is a rootedness in taking a holistic approach to examining social totalities (Mosco, 1996). However, when analyzing this totality it is often necessary to draw upon other disciplines, such as innovations studies, to inform the macro-analysis and theory of political economy (Mansell, 2004). One such discipline that can aptly provide insight is entrepreneurial studies, which has roots in economics. Entrepreneurial studies is concerned first and foremost with explaining how new products and business ventures are created, by whom and through what means and in part often defines entrepreneurship as the exploitation of entrepreneurial opportunity for profit (Shane & Venkataraman, 2000). The process of choosing to exploit an entrepreneurial opportunity is a process of commodifying value at the micro level. It is to recognize that an idea or object has the potential to generate profit through the undertaking of an entrepreneurial venture. By understanding the cognitive frameworks that entrepreneurs generally use in making such decisions, it is possible to get a stronger sense of the social influences that impact upon creators of digital media to engage in the commodification process and perpetuate capitalism.

Yet another discipline that is ripe for contribution to the political economy of communications is marketing studies, specifically in terms of the concept of customer value. Customer value, which also has roots in organizational studies, in this context is considered to be the perceived benefits of an object relative to the costs (whether economic, social, physical, psychological, etc) associated with the object (Zeithaml, 1988). When applied to entrepreneurial

endeavours as in this study, customer value helps define the way in which use values are identified and then commodified and also helps to identify what values are being identified. Combined, this research from entrepreneurial studies and marketing studies can shed light on how and why choices are made to engage in the commodification process when producing digital media.

Customer Value

Customer value is a term for which a generally accepted definition remains elusive (Parsuraman, 1997). Within the context of organizational management, customer value is typically defined in terms of either the value of the customer to a firm, or the value that a customer perceives in a product (Woodruff, 1997). Both of these concepts of customer value can be viewed within a Marxist framework focused on commodification. Attempts to quantify the value of the customer to a firm can be viewed as part of the audience commodification process. Likewise, the value that the customer perceives in a product is a determining factor in what exchange value is assigned to an object.

For the purposes of this study, customer value is defined as the value that customers perceive in products. Yet even this definition of customer value has yielded multiple meanings. Woodruff (1997) notes five different definitions that range from defining customer value as the perceived utility of a product (Zeithaml, 1988: 14) to the emotional bond established between a customer and product (Butz & Goodstein, 1996: 63) (Woodruff, 1997: 141). However there appears to be some points on customer value that have achieved a level of consensus; customer value is inherently linked to a product, as opposed to ethical or moral values; the value involves a trade-off between a benefit and sacrifice of some sort; and it is something that cannot objectively

be perceived by the seller (ibid). This last point will be examined further within the context of entrepreneurship. However, for present purposes it would be helpful to look at a few definitions of customer value in greater detail.

As previously mentioned, one definition of customer value is that it is the emotional relationship that a customer has with a product (Butz & Goodstein, 1996). “Establishing this bond means that the goods or services provided regularly meet or exceed that customer’s expectations” (ibid: 64). This viewpoint of customer value is originally attributed to Cross and Smith (1995). Within this definition, customer value is intuitively determined by the customer when evaluating a product, based upon their belief systems and values (in this case referring to value in larger sense) (Butz & Goodstein, 1996). Within this conceptualization of customer value, the bonding that takes place is the observable behaviour that a customer exhibits in their relationship with the supplier of a product. “It is the underlying emotional bond that leads to such a stance and is at the core of customer bonding” (ibid: 65).

While this conception of customer value is not the predominant one, the idea of an emotional bond between customer and product is important. The psychological bond an individual has with a project or service allows for capital to maximize exchange value. Logically, the stronger the psychological bond between a customer and a product, the more willing a customer is to give up in exchange for the product. However, this definition does not explain how or why this bond is created; merely that it exists and is observable.

Uлага (2003) conceptualizes customer value in a similar fashion. While noting that most definitions are rooted in a transactional approach, there is also a relational element to customer value creation. Relationship value can be seen as a holistic accounting of the economic, strategic and behavioural value that is indicative particularly in long term exchange processes (ibid: 678).

What is defined as relationship value, in other definitions seems to be the same as the overall concept of customer value. The central idea here is that the relationship between customer and product is one that has many social and psychological components beyond the economics of monetary exchange, but which impact on that exchange.

One particularly interesting definition is that put forward by Holbrook (2005). He describes customer value as “an interactive, relativistic, comparative, personal, and situational, preference and experience” (ibid: 46). It reflects comparisons between products, differs from individual to individual, is situated in a social and historical context, and embodies a system of preferences that are attached not to the product but to the experience (ibid). This is significant, because it implies that the value it is not within the product itself but produced through the consumer. If one were to think about this within a Marxist framework of commodification, Holbrook lends credence to the idea of audience commodification, as products appear to be doubly commodified. A product is first commodified through the labour process of production, and then commodified again through efforts of the consumer to use the product, which produces an experience, creating customer value for the product.

This paper follows Smith and Colgate’s (2007) adoption of Woodruff’s (1997) definition of customer value. “Customer value is a customer’s perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer’s goals and purposes in use situations” (Woodruff, 1997: 142). Central to this definition is the notion that value is based in part on a customer’s learned perception (ideology), preferences and evaluations, and like Holdbrook, links products with use situations and consequences (ibid). Smith and Colgate (2007) suggest that this definition is not clear on the empirical operationalization of this construct; despite this, the dimensions of value

denoted within this conceptual framework allow for the framework to be applied both theoretically and practically.

Customer Value Frameworks

Smith and Colgate (2007) note that while there have been several attempts at devising a conceptual framework for customer value previous to theirs, none are suitable for the practicalities of developing marketing strategy or measuring customer value (8). However they identify six conceptual frameworks which they draw upon to formulate their own; these conceptual frameworks have been devised by Park, Jawarski and MacInnis (1986), Sheth, Newman and Gross (1991), Ulaga (2003), Woodall (2003), Holbrook (2005) and Heard (1993-1994).

Park, Jawarski and MacInnis (1986), identify three predominant categories of customer value; functional needs, symbolic needs and experiential needs. Functional needs are the need for products to solve a consumption-based problem, while symbolic needs involve the desire for self enhancement in some way and experiential needs are the need for products to provide sensory pleasure and/or cognitive stimulation. While products are often placed into one of these three categories, they in fact often contain elements of all three and can be theoretically position within all three categories (136). Smith and Colgate (2007) argue that while this is a good starting point, the typology fails to capture the sacrificial element of customer value (8).

Sheth, Newman and Gross (1991) identify five categories of customer value: functional value, social value, emotional value, epistemic value and conditional value. In this case functionality refers to the use of product. Social value is the value of using a product to associate or disassociate with a specific socio-economic or cultural group. Emotional value is similar to Butz & Goodstein's (1996) notion that customer value is created through an emotional bond

between the customer and product. Epistemic value is the novelty of a product and conditional value is the value of using a product in a specific situational context. However, it has been pointed out that this framework lacks a sacrificial component (Smith & Colgate, 2007).

Uлага (2003) presents a customer value framework that is comprised of eight categories; product quality, delivery, time to market, direct product costs, process costs, personal interaction, supplier know-how and service support. Product quality refers to reliability, technical performance and consistency. Delivery refers to the ways in which products are delivered to the customer and how this meets with their needs and expectations. Time to market is how quickly a product can be developed and made available to the customer. Direct product costs are the prices charged for a product. Process costs are the costs of acquiring, storing and operating a product. Personal interaction is the relationship between the customer and the provider of the product or service. Supplier know-how refers to knowledge that the supplier can provide to the customer beyond the product being purchased. Finally, service support is the availability of the producer to provide “the right information at the right time” to the customer to aid with the use of a specific product (ibid: 683). However, the focus of this framework is specifically within the context of a business to business sales relationship (Smith & Colgate, 2007). And while comprehensive, this framework leaves out categories such as symbolic and experiential value that end use customers seek.

Woodall (2003) envisions a framework with a set of five categories of customer value; the net value between benefits and sacrifices; the value derived from use/experience outcomes; the marketing value; the sale value when sacrifice is reduced; and the rational value. However, it has been noted that these categories contain a great deal of overlap, making it difficult for this framework to have a practical use (Smith & Colgate). Also problematic is Holbrook’s (2005)

categorization which involves considering whether a product has intrinsic or extrinsic value, is self oriented or other oriented and is active or reactive (47). Out of this framework, he has devised the categories of efficiency, excellence, status, esteem, play, aesthetics, ethics, and spirituality. Like Ulaga (2003), the primary objection towards Holbrook's (2004) framework is that it is too limited in applicability (Smith & Colgate, 2007). In this specific case, some categories such as play don't appear to translate well when examining business to business relationships. Last but not least, Heard (1993-1994) links customer value to the value chain, categorizing these values as product characteristics, delivery orders and transaction experiences. While interesting, this typology is not as practical to use in this particular study.

Smith and Colgate (2007) have devised a customer value framework that attempts to integrate the strengths of the previously mentioned conceptual frameworks while addressing the perceived weaknesses. They claim that their "intent is to develop a comprehensive framework applicable to consumer and business contexts, and goods and services as well" (ibid: 10). In order to accomplish this, they have identified four types of value from previous concepts: functional/instrumental value, experiential/hedonistic value, symbolic/expressive value and cost/sacrifice value. At the same time they identify information, products, interactions, environment and ownership as the five main sources of customer value. Mapping these categories onto a table results in "a foundation for measuring or assessing value creation strategies" and "a tool for opportunity recognition" (ibid: 10).

Value Types

Functional value is a measurement of how well a product performs its desired function and has desired characteristics (Smith & Colgate, 1997). Most previous research on customer value has focused on the how customers use the functions of products, as it can be observed and validated

through the application of the product. Citing Woodruff (1997), Smith and Colgate (2007) see the key attributes of functional value to be

1) correct, accurate, or appropriate features, functions, attributes, or characteristics (such as aesthetics, quality, customization, or creativity); 2) appropriate performances (such as reliability, performance quality, or service-support outcomes); and 3) appropriate outcomes or consequences (such as strategic value, effectiveness, operational benefits, and environmental benefits.

(Smith & Colgate, 2007: 10)

Experiential/hedonistic value is the extent to which a product creates an appropriate experience or emotion. This again ties into the notion of Butz and Goodstein (1996) that emotion plays a central role in the perception of customer value. Smith and Colgate (2007) note that service based industries, such as restaurants, entertainment, travel and retailers place a particular emphasis on this value.

Symbolic/expressive value denotes to what point customers attach psychological meaning to a product. This can encompass many things, from the social prestige associates with “luxury” products to the personal meanings that individuals correlate with certain products, and to the use of products as a means of self-expression. Smith & Colgate (2007) make a specific point that symbolic/expressive value includes both conditional meanings (meaning created from socio-cultural events or traditions) and personal meanings of products, but argue that while some may consider them to be the same, they are in fact distinct way of creating meaning (12).

Finally, *cost/sacrificial value* is any negative value that may be associated with a product. While transactional costs are the most straight-forward, other costs values include cognitive difficulty in using a product, stress associated with its use, the cost of learning to use the product and the cost of finding the product (ibid: 14).

Customer Value and Entrepreneurship

Smith and Colgate (2007) link customer value creation to opportunity recognition as part of the process of entrepreneurship (7). Yet, while they acknowledge that customer value is created through entrepreneurship, their conceptualization of customer value looks primarily to established firms for examples and suggested applications. Smith and Colgate use Shane and Venkataraman's (2000) definition of opportunity recognition, where an opportunity is defined as the recognition of a new product that can be sold for greater than the production cost which requires the discovery of new means-ends relationships (220). Within this definition of entrepreneurship, it is the producer rather than the customer who observes value through the recognition of an opportunity. This is in direct contradiction of Smith and Colgate's (2007) understanding that customer value originates with the customer, despite the link they draw between it and entrepreneurship.

This presents a ready opportunity to strengthen the definition of customer value. While it is necessary to understand that customer value is perceived as value for the customer, in the case of entrepreneurship it is identified by the entrepreneur who is standing in for the customer. This differs from Woodruff's (1997) definition of customer value in the sense that a customer is not necessarily the one who needs to perceive the value and evaluate a product in all cases. As discussed by Shane (2000), a key component of opportunity discovery is the application of an individual's prior idiosyncratic knowledge, which includes work experience, education and other

life experiences (452). This occurs through the reshaping of information and experiences through comprehension with new experiences (Kolb, 1984 as cited in Corbett, 2007: 103). In a sense, experiences are evaluated by the entrepreneur just as they would be by a customer when determining the customer value of a product. With this understanding, the commodification process of identifying customer value can be placed confidently within the entrepreneurial process.

Entrepreneurship

Entrepreneurship has traditionally had two distinct definitions. The first is that entrepreneurship is the assumption of financial risk and uncertainty (Knight, 1921). This definition is rooted in neo-classical economics and has typically been a person-centric definition, arguing that central to entrepreneurship is an individual's level of risk aversion (Gartner, 1990). The second definition, the one used here, is that entrepreneurship is the discovery and exploitation of entrepreneurial opportunities (Shane & Venkataraman, 2000). To reiterate, entrepreneurial opportunities are "situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends, or means-ends relationships" (Eckhardt & Shane, 2003: 336).

Within this theoretical conceptualization, entrepreneurial opportunities are objective phenomena, although these opportunities are not known to all individuals at all times (Shane & Venkataraman, 2000). The reason that opportunities are not known to everyone is accounted for by information asymmetry; that each individual is in position of different knowledge and information than any other individual (Shane, 2000). This is a necessity of entrepreneurship

because if everyone held the same information, then there would theoretically be infinitely equal entries to the marketplace, making profit impossible for any one particular entrepreneur (Shane & Venkataraman, 2000). Thus an entrepreneurial opportunity is discovered “through recognition of the value of new information” (Shane, 2000: 451). This the driver of the larger economic process called “creative destruction” (Schumpeter, 1943/2003). Creative destruction is a cyclical process, where old firms and products become unprofitable and cease to exist when new products, developed by entrepreneurs, take away market share; the new creative products destroy the old ones.

Opportunity Recognition

“Although an opportunity for entrepreneurial profit might exist, an individual can earn this profit only if he or she recognizes that the opportunity exists and has value” (Shane & Venkataraman, 2000: 221). Entrepreneurial scholars have theorized that the two primary requirements for opportunity discover are prior knowledge and the proper cognitive tools to interpret the information. Both of these are inherently linked with one another, as information is arranged and rearranged in mental frameworks, which are constantly in flux. Information is not distributed evenly across society, but rather typically specialized in individuals (Hayek, 1945). As mentioned before, this allows entrepreneurs to take advantage of asymmetries in information and exploit and entrepreneurial opportunity.

The cognitive tools that entrepreneurs develop and use are just as important to the entrepreneurial process as the information that an entrepreneur possesses. The field of entrepreneurial cognition is a steadily growing area of study that is making headway into understanding why and how the entrepreneurial process occurs. A strong definition of

entrepreneurial cognition is “the knowledge structures that people use to make assessments, judgments, or decisions involving opportunity evaluation, venture creation, and growth” (Mitchell et al, 2002: 97). While the field has presented various theoretical frameworks (ie; Corbett, 2007; Baron 2008) what is of greater interest here is the practical research that has been conducted. For example heuristic logic, cognitive biases, cross-cultural entrepreneurial scripts and interaction with the environment have been shown to play key roles in developing the cognitive resources that entrepreneurs employ. Each of these will be explained in further detail here.

To begin with, entrepreneurs often employ heuristic based logic in their decision making process (Mitchell et al, 2007). This is logic based upon the simplification of information. This decision making logic is often considered to be subjective, influenced by beliefs based in new methodologies of problem solving and based on experiences; “A heuristic-based logic often enables entrepreneurs to make sense of uncertain and complex situations more quickly and, relative to more orthodox approaches to decision making, perhaps expedite learning” (ibid: 7). This mode of logic however can also lead to cognitive biases (Simon et al, 2000). “Certain cognitive biases may lead individuals to discount the negative outcomes and the uncertainty associated with their decisions, thereby leading to the underestimation of risk (ibid: 117). In particular, Simon, Houghton and Aquino (2000) indentify three particularly strong cases of entrepreneurial cognitive bias; overconfidence, an illusion of control, and the belief in the law of small numbers. When an entrepreneur is overconfident, at times they can be seen to take assumptions based on incomplete data for fact, thus taking on more risk than the assumption would warrant. At the same time, a bias of illusion of control occurs when an entrepreneur overestimates their skills and abilities. Finally, a belief in small numbers occurs when an

entrepreneur bases fact on a small sample size. All three of these biases result in a greater willingness to take on risk, whether a conscious decision or not.

In a 2000 study, Mitchell, Smith, Seawright and Morse found that cross-cultural differences between entrepreneurs are not as pronounced as originally believed. Entrepreneurs across cultural lines employ arrangement scripts when first examining an opportunity, followed by doing scripts. Arrangement scripts involve idea protection, networking, having access to resources and having skills specific to the opportunity (ibid: 977). Doing scripts involve the actual carry out of business activities and the making of venture creation decisions. They also found that ability and willingness scripts are culturally influenced to a greater extent, impacting more apparently on doing scripts. Ability scripts include scripts for evaluating the specific potential of an opportunity, script for applying situational knowledge to the enterprise and scripts for judging the fit between abilities and opportunity (ibid: 978). Willingness scripts involve being open to and seeking out new situations, willingness to assume risk, and determination to pursue to avoid missing out on a window of opportunity (ibid: 978). This implies that while entrepreneurs encounter unique situations when creating new products, they tend to go about creating the products through a common process. This process involves drawing on prior information, having access to networks, possessing a skill set specific to the opportunity and evaluating how well these aforementioned steps can be of a competitive advantage. It could be suggested, from a Marxist political economic perspective, that these cross cultural scripts get taught to entrepreneurs through the hegemonic ideology of capitalism. While culturally specific scripts may also be hegemonic and capitalistic, the point here is that capitalism is practiced and idealized across many cultures.

One script of particular interest is the employment of networks. Industrial networks are but one of the environmental influences that play a role in developing the cognition of entrepreneurship. “The broader the entrepreneurs’ informal networks, the more likely they are to gather relevant information” (Ozgen & Baron, 2007: 177-178). Other sources of information that shape not only the opportunity recognized but the cognitive skills brought to bear, include mentors, industry forums and, to a lesser extent, family and friends (ibid). Additionally it has been argued that macro level socio-environmental factors that establish the basis for economic activities shape entrepreneurial cognitions (North, 1990). Thus, differing institutional environments result in differences between technology-based entrepreneurs and venture capital entrepreneurs (Lim et al, 2010: 494). Lim, Morse, Mitchell and Seawright (2010) identify the legal system, financial system, and trust relations as three institutional environments that impact directly on entrepreneurial cognitions.

It is in these institutional and environmental conditions that customer value can be seen entering into the entrepreneurial process. Because industry forums, for example, play a significant role in the development of cognitive frameworks for opportunity recognition then logically the information on customer value that is known throughout the industry will be imparted to the entrepreneur, not just in terms of specifics when identifying an opportunity but in terms of the framework of values which the entrepreneur is seeking to identify. When explained in political economic terms, this is how the socio-economic influences of society shape individual capitalistic ventures: through the influence on individual cognitive frameworks that shapes how an entrepreneurial opportunity is perceived.

Exploitation and Commodification

Along with the process of recognizing opportunities, a key stage in the entrepreneurial process is the decision to exploit the opportunity once it has been found. A popular definition of exploitation within the entrepreneurship literature is the earning of entrepreneurial profit (Shane & Venkataraman, 2000). At this point, an entrepreneur is extrapolating surplus value from the original opportunity, in a similar fashion as Fuchs (2010) describes surplus value being derived from knowledge labour. It is important to note though that in the case of entrepreneurship, it is possible that the entire labour output can entirely come from one individual. In this situation, the entrepreneur could be considered part of what Fuchs classifies as self-employed, which he places within the labouring class as opposed to the capitalist class. On the other hand, once additional labour is brought onboard, it is possible to conceptualize the exploitation process as such; the original exchange value of the opportunity becomes thought of as the property of the entrepreneur that is then further exploited through the employment of labour, as opposed to knowledge labour that is being exploited by others.

Shane and Venkataraman (2000) identify two main modes of opportunity exploitation; the creation of new firms and the sale of opportunities to existing firms (224). In a sense, this is a fundamental choice by the entrepreneur as whether to remain part of the labouring class or to achieve the level of capitalist. Factors that play a role in the choice between these modes include availability of financing, the level of barriers for entry in an industry, the strength of intellectual property laws, and the level of uncertainty associated with the opportunity (ibid). It therefore appears that while the entrepreneur has agency to choose what whether to exploit an opportunity as a member of Fuchs' capitalist class or labour class, the greater socio-economic forces of

society play a prominent role in influencing which choice will be made by any particular entrepreneur based upon the circumstances of that the industry within which they are operating.

This leaves a strong opening for entrepreneurial studies to inform political economy research on digital media. Examining the cognitive processes and frameworks that entrepreneurs employ, along with the prior knowledge that they draw upon, is strong evidence of what specific ideologies and influences affect digital media entrepreneurs and the value they attempt to create. This it turn should give insight into the micro-foundations of commodification; specifically providing evidence on the processes that are employed in choosing to exploit one form of commodification over another. Finally, it can provide evidence to the role that the policies and practices of social structure play in shaping individual entrepreneurs' understanding of the entrepreneurial and commodification processes.

Summary

Commodification is a process of great concern for political economists conducting research in communications. Commodification can take many forms, through which use value becomes exchange value. These forms include the commodification of content; labour and knowledge; and audiences. Each of these commodification processes are of particular importance to digital media. As labour in communications is becoming more intangible, particularly in digital media, it is becoming increasing easier for capitalists to exploit knowledge and information for profit (Fuchs, 2010). Part of the process of knowledge commodification has become linked with the process of audience commodification within the medium as well. Like traditional media, content is given to audiences in exchange for advertising; however beyond this, audiences are now often providing content that is ready to be appropriated by capitalists at

little cost, decreasing labour fees for them. The commodification of the content itself is also a central issue in digital media, as symbols and ideologies can be transported across the globe instantly. Commodification as a process can be observed at the micro level of individual entrepreneurs, who identify a perceived customer value that they wish to exploit, hence the decision to use marketing studies and entrepreneurial studies to inform this political economic analysis.

Customer value is the value the customers generally perceive within a product (Woodruff, 1997); or, as discussed, the value that is perceived in a product on behalf of customers. Examining customer values allows one to understand the extent to which a product is commodified for the customer. Further, through an application of a workable customer value framework, such as the one put forth by Smith and Colgate (2007), there is an opportunity to understand from both an individual and societal perspective what hierarchies exist for specific values.

Finally, entrepreneurship, one way of the two ways in which customer value may be generated, is also a key form of production within capitalism. Entrepreneurs are explicitly caught up in the commodification process through the identification and exploitation of opportunities (Shane & Venkataraman, 2000). Studies of entrepreneurial cognition present an understanding as to the frameworks that individuals operate within when perceiving opportunities, thus it can allow for an examination of the precise mechanics of commodification from the starting point. Entrepreneurial studies also can aid in an understanding of how and what societal influences have the greatest impact on the commodification of new products.

Research

In studying commodification at the micro level of individual entrepreneurs, I have chosen to apply Smith and Colgate's (2007) practical customer value research to products in development at the Ryerson Digital Media Zone (DMZ). The purpose of this study is to discover how digital media entrepreneurs operating within the DMZ talk about the value of their products. Through analyzing their responses, it is possible to discover what values, as outlined by Smith and Colgate (2007) may or may not be perceived by digital media entrepreneurs. In addition to this, it aims to discover what differences may exist in the ways in which value is discussed at the DMZ and how these values are specifically described.

The Ryerson DMZ is a business incubator that was chosen as a site of study for its access to multiple entrepreneurs working specifically with digital media. This has also provided an opportunity to observe how Ryerson and the DMZ influence or attempt to influence the choices made by the entrepreneurs to exploit entrepreneurial opportunity and specific values. This question of how institutions and other societal structures influence the process of commodification is a central question for political economist (McChesney, 2000).

Research Design

This study employs qualitative field research conducted on location at the Ryerson Digital Media Zone in June and July of 2010. Due to the size of the DMZ and the number of entrepreneurs operating within it, this research is meant to be viewed as exploratory. However, Shane (2000) demonstrates that a similar research design, of entrepreneurs operating within an academic setting is an acceptable approach for conducting research on entrepreneurship.

Procedure

Entrepreneurs within the DMZ were contacted, first by email through the Ryerson chapter of Students In Free Enterprise (SIFE) and then in person at the DMZ. SIFE Ryerson is a student group that is heavily involved in the operation of the DMZ, particularly through their Start Me Up program, the completion of which is a central requirement for entrepreneurs to gain entry to the DMZ.

Four qualitative interviews were conducted with entrepreneurs in total, while some other complementary discussions occurred with employees of the DMZ to gain further insight into its operations. These interviews were between half an hour to an hour in length. The interviews were conducted in an informal setting with open ended questions allowing for the entrepreneurs to describe their products and themselves in their own words. This was done in an attempt to prevent the question from biasing any results. Each entrepreneur was initially asked to describe their product, and then asked describe how they came about getting the idea for the product and how it has been developed. The entrepreneurs' academic and employment backgrounds were also brought up, as well as what the individuals' intentions were as an entrepreneur past the initial launch of the product.

Interviews were recorded in detailed field notes and contact information for each entrepreneur was collected for future verification of the responses if necessary. I then analyzed these notes in comparison with the customer value framework table provided by Smith and Colgate (2007). "The framework could be used to assess the customer value creation strategy of an organization by means of content analysis, of business plans, marketing plans, communication plans, or other documents and materials that describe marketing activity" (ibid: 17). In addition

to classifying responses by value, this analytic table also categorizes them by source of value, allowing for a detailed understanding of how each entrepreneur has chosen to talk about the value of their product.

At the time that field research was conducted, the DMZ had roughly eight to ten companies operating within it. These companies have gained admittance through an application process conducted by the Ryerson chapter of Students in Free Enterprise where the entrepreneurial idea and business plan are initially reviewed. According to the director of the DMZ, there are four criteria for entry (personal communication, July 22, 2010). The first is a unique idea based in digital media that is perceived to have either social or commercial value. The second is that the initial idea must be developed to the point where some sort of prototype has been developed. Third, the entrepreneurs must be willing to participate in activities that the Digital Media Zone engages in, such as tours and social events. And finally, the entrepreneurs must use the opportunity to enhance Ryerson's reputation, particularly in terms of publicity.

Sample

In total, four entrepreneurs chose to participate in the interview processes. For the purposes of this study they will be referred to as Entrepreneurs A, B, C and D.

Entrepreneur A is a current Ryerson student enrolled in the business program. This entrepreneur is developing a product that will allow individuals to electronically post suggestions and comments for an organization, or vote for or against previous posted suggestions. Comments are automatically tagged and categorized, allowing individuals to search effectively through all

comments on a specific topic, and to vote on topics of concern, providing a constant feedback loop for the organization.

Entrepreneur B is a graduate of Ryerson's business program who has work experience in computer programming. This entrepreneur is one of the inventors of a mobile phone and internet browser application that can send photographs instantly from any phone to any other phone or computer. At the same time, the photo is tagged with information as to the exact time and location that it was taken that can also be transferred.

Entrepreneur C is a graduate from the business program of a university located in South-Western Ontario. The entrepreneur is collaborating with a business partner who has connections with Ryerson, which allowed them to gain entry to the DMZ. Entrepreneur C's product is a job board that is dedicated to exclusively serving the Canadian student population. Through the application of numerous filters, the product allows for companies to compare candidates and their academic record across programs and schools based on criteria put forward by the client companies.

Entrepreneur D is a graduate of Ryerson's computer engineering program. After over a half decade of experience in computer programming, the experience of being the first employee hired by a start-up company led this individual to decide to become an entrepreneur. Entrepreneur D's company is developing an interactive digital media player that combines traditional media with other elements that allow for user participation.

Results

Entrepreneur A

Entrepreneur A's interview was conducted on June 8th, 2010 and lasted roughly 45 minutes in length over the course of which a great deal of ground was covered. The entrepreneur began by offering an explanation of the historical context of the product's name and how the name both describes the product and also instils symbolic meaning on the product. According to the interviewee, Product A is meant to be a virtual forum for discussion, based around the concept of public forums of debate for use in both the public and private sectors. The entrepreneur expressed that the product is meant to be "simple, quick and easy" to use, with the target user of the "silent majority".

Product A's design is meant to reflect the mantra of "simple, quick and easy". Users have the ability to post comments on a website layout that has similarities to a message board. These messages are automatically tagged and organized by the product's coding, and then grouped with similar comments. Users are then free to vote to support or reject this comment, being given one vote for or against each comment. Various means of sorting the comments are given to the users to allow for personalization when viewing these assorted statements; there is a choice to view them as to the most recent comments, popularity, topic category and controversy (those comments that have the largest total votes as well as the largest discrepancy between for and against). Moderators have the ability to post a full response to any comment, which is then linked to that first comment.

According to Entrepreneur A, the idea for this product came about sometime around October of 2009. The entrepreneur felt that they, like the majority of students, lacked a voice when it came to decisions made by university officials. In an effort to become proactive in this regard, Entrepreneur A arranged for a meeting with their school president and, becoming overwhelmed once the meeting was scheduled, began making lists and soliciting advice from friends as to what changes should take place to the institution. As a result the idea for an online forum was born and the meeting became about pitching this idea. Receiving warm support from the school administration, it was eventually brought to the DMZ, as Ryerson administration continued to show enthusiasm for the product.

Entrepreneur A identified a variety of potential customers for this product; everything from academic and public institutions to corporations. Revenues are planned to come from a monthly fee for use of the product, which is being considered as a service. This fee will be decided on a scale, depending on the nature and size of the organization that wishes to use it. In the future, Entrepreneur A expressed an interest in selling the company that is being founded around this product to a larger corporation that has the capacity to continue building upon the idea. This entrepreneur also made it clear that there is an intention to continue to pursue entrepreneurial opportunities.

When asked how working within the DMZ has affected Entrepreneur A and the process of creating Product A, the entrepreneur suggested that it has helped in two ways. First, being in the DMZ has meant access to support in a social sense; everyone working there has been willing to give advice on general business and management issues that arise. Secondly, the DMZ has

meant access to technical support. For example Entrepreneur A has received help from usability experts that work for a large corporation in the computer industry.

Entrepreneur B

Entrepreneur B's interview took place on June 24, 2010. It lasted between half an hour and forty five minutes in length and began with a demonstration of Product B. Product B is a mobile phone application which allows for a photograph to be instantly sent to any other designated mobile phone also using the application as well as to an online repository that can be viewed through a standard web browser. It was also shown in the demonstration that viewing the pictures in a web browser also allows individuals' access to information on when it was taken and a map of the area that it was taken.

While giving this demonstration, Entrepreneur B explained that the idea for this product came about when, in discussion with a co-inventor, a need was expressed for an easier way to create online photo albums from mobile devices. Entrepreneur B felt that such an invention would make it easier for family and friends to stay in touch. This initial idea came about in November of 2009. By January 2010, Entrepreneur B had begun working full time on the project.

Entrepreneur B's long term business strategy is to sell the rights to Product B to a mobile phone manufacturer who could then make it a feature of their products. In the meantime, the strategy to introduce the product is to offer it as a "freemium". Entrepreneur B described a freemium as something users can use for free or choose to pay a premium to continue to use after a certain point. In the case of Product B, the intention is to allow users a certain number of

pictures to be taken and transferred for free, after which a small cost for each additional picture would be charged. Like Product A, Product B is primarily viewed by Entrepreneur B as a service. While using the freemium sales model, users will retain complete copyright and ownership over the pictures taken with Product B. At the same time, there has been a deliberate decision made not to subject users to advertising through the use of the product.

Like Entrepreneur A, Entrepreneur B was asked about the effect that being in the DMZ has had in shaping this product. They suggested that first and foremost, being in the DMZ has produced a constant feedback loop for ideas and has been a fertile testing ground for the product. This, combined with the physical space to work in, has been a huge help in development of Product B.

Entrepreneur C

Entrepreneur C's interview occurred on June 24, 2010, directly following the interview with Entrepreneur B. However, Entrepreneur C was not privy to any of the content of the previous interviews to the best of my knowledge. The interview began with Entrepreneur C giving an overview of how the idea for Product C came about. It was expressed that after graduating from University, this individual reflect on the difficulty they faced when applying for jobs as a students, and the similar experiences of friends. Entrepreneur C particularly pointed to a perception by students that there is a lack of coordination between co-op programs and student career service departments within universities and between universities. It was from this perception that student employment services could be improved that Entrepreneur C had the initial idea for Product C; a website that could serve employers and students from every

university across Canada, that can allow for a level playing field for all students regardless of school or program when applying for a job.

While Entrepreneur C did not demonstrate a prototype of the website, it was described in the interview. Students using Product C will have the opportunity to create a profile, search and apply for jobs and make connections between the site and social networking sites. It was suggested that for the student user, the experience of the site is not much different from any other job site. Rather, Product C is focused on allowing students to feel engaged in the process and have their specific needs catered to. For companies using Product C, Entrepreneur C described the experience as a fully customizable one. Filters are being developed for all schools in order to aggregate student experiences. No rating system will be in place on personal characteristics, but academic credentials will be ranked according to the wishes of client companies. In addition, features are being developed to allow for interviews and hiring processes to be scheduled through the website, allowing for it to encompass the entire hiring process.

During the interview, Entrepreneur C expressed that Product C was undergoing redevelopment. The idea was originally presented to SIFE Ryerson through the DMZ application process in February 2010, during which the business plan was thoroughly reworked. Since gaining acceptance to the DMZ the following month, changes have continued to occur to the product, including moving software development from a third party to within the company and development of revenue streams. Currently, the primary source of income is planned to be service fees to companies that choose to use the website to seek student employees. In addition, what was expressed as advertising/sponsorship revenue is expected, as companies will be given priority listings for a fee. Finally, data mining (the act of selling personal information about users

to a third party) is being looked at as a potential source of profit. While in the long term, Entrepreneur C expects the product and company founded around it to be bought out, there is no plan to expand on this product through branding or any other means. Entrepreneur C stated that some other ideas for products were in the earliest stages of development but that they are unrelated to Product C, as the individual does not want to become stuck developing only a single type of product.

Like Entrepreneur A and B, Entrepreneur C mentioned that the primary way in which the DMZ has helped in development has been the constant advice that is available if asked for. For example, marketing advice is available for those who want help with this aspect of product development. Another way in which it has been a help is that working in the DMZ creates a sense that everyone is pulling together in a larger context rather than working individually.

Entrepreneur D

Entrepreneur D's interview took place on June 30, 2010. This interview was the shortest of all, running for just shy of half an hour. Like Entrepreneur C, Entrepreneur D did not give a demonstration of their product. However, Product D was described as an interactive media player that uses bookmarks to allow for users to be able to participate in an online media viewing experience. Entrepreneur D began the interview by explaining how they came about deciding to become an entrepreneur, which unlike the other entrepreneurs interviewed was a direct result of work history. This entrepreneur originally graduated from Ryerson's computer engineering program and had worked for several years as a software designer. While pursuing work in this sector Entrepreneur D had the opportunity to work for a start up company, and in fact was the

first employee hired by the company founders. According to Entrepreneur D, it was this experience that awakened a desire to become an entrepreneur.

The idea for Product D came as a result of exploring how the nature of television viewership is changing. Product D was described as a way to tie convergent functionality into video. Through the utilization of bookmarks, it will allow for interactivity and gaming features within an online video player. This product will also be fully searchable for content. According to Entrepreneur D, the start of development for Product D began roughly around June, 2009 and it was expected that the product would launch in July 2010.

Entrepreneur D's business model is based solely upon revenue from other businesses, specifically online broadcasters. However, this was referred to by the entrepreneur not as sales but as business partnerships. Through the fostering of partnerships the entrepreneur sees the opportunity to save on costs and increase the creditability of Product D. However, Entrepreneur D also acknowledged that the actual potential for this product in the marketplace largely had not been identified, and that the learning curve involved with using the product may be a hindrance to success, as changing user behaviour can be challenging.

When asked about the impact that being in the DMZ has had for Entrepreneur D, this individual brought up that it has produced significant savings in development costs, such as equipment and rental space costs. Entrepreneur D also brought up the notion that operating in the DMZ adds credibility and prestige to themselves and Product D. Credibility, in the sense that it is associated with the other products being developed in the DMZ and with Ryerson itself. Prestige was largely defined as both the exclusivity of being in the DMZ and the exclusivity of having

office space in an area of Toronto that is perceived to have high rental costs according to the entrepreneur.

Discussion

Customer Value Framework Applications

Tables one through four shows the results of applying comments made by the four entrepreneurs during their interviews onto Smith and Colgate's (2007) customer value framework. This has resulted in a number of trends emerging in regards to how all of the entrepreneurs talk about customer values. The most apparent of these trends is that the first and foremost value discussed consistently by all of the entrepreneurs was cost/sacrifice value. In particular, in terms of ownership/possession transfer as a source of cost/sacrifice value, all of the entrepreneurs brought up business to business sales in some form as a potential source of revenue. This demonstrates that not only have all of the entrepreneurs have considered the exchange value of their products but that they have devised similar methods for creating this value.

Another area within the customer value framework table that was touched upon by all entrepreneurs is that of direct interactions with customers as a source of cost/sacrifice value. In fact, this was the only other area of value within the framework table that all four entrepreneurs made comments which were applicable. Smith and Colgate (2007) suggest that when considering how customer interactions with employees are a source of cost/sacrifice value one should be aware of how these interactions increase or reduce the economic and psychological cost of a product or the personal investment required to acquire and consume it (20). For Entrepreneur A, this value is seen as a positive for Product A, as training is being offered to client companies for

Entrepreneur A - Customer Value Framework – Table 1

Sources of Value	Functional/Instrumental Value	Experiential/Hedonic Value	Symbolic/Expressive Value	Cost/Sacrifice Value
Information		It meant to be an informative tool	Name of the product was chosen for its historical connotations	Employs auto-tagging like other social networks
Products	A platform for discussion	Allows for instant communication		
Interactions		Business can customize their version of the products in terms of colours		Training provided for administrators
Environment		Bringing people together		
Ownership/Possession Transfer				Business to business mode

administrative purposes. Entrepreneur B's freemium model for end users allows them a low level of personal investment to try out the product. In the case of Entrepreneur C, the product is free for students to use, minimizing their economic investment. Finally, for Entrepreneur D, the viewing the relationships with clients as business partnerships is viewed as enhancing the credibility of everyone involved with the product.

In all, cost/sacrifice value was the value type that was discussed by all four entrepreneurs most often. Each individual made comments that can be seen to fall into four areas of the cost/sacrifice column on the customer value table. The next two most discussed value types were experiential/hedonistic value. Entrepreneur A made comments that fall into four of the areas experiential/hedonistic value while Entrepreneur B made comments that fall into three areas while Entrepreneurs C and D made one statement each that can be classified under the value.

Entrepreneur B – Customer Value Framework – Table 2

Sources of Value	Functional/Instrumental Value	Experiential/Hedonic Value	Symbolic/Expressive Value	Cost/Sacrifice Value
Information			Company name reflects activity	
Products	Creates online photo albums instantly	Allows people to keep in touch	Allows people to express themselves through pictures	Made to be intuitive
Interactions		Build on an open platform so anyone can contribute		Freemium model allows for low personal financial investment on part of users
Environment		Product situates an individual in time and space		
Ownership/Possession Transfer			Individuals are owners of their own pictures	Working towards a business to business mode

Symbolic/expressive value and functional/instrumental value were discussed almost equally by the entrepreneurs in total; however there was a great deal of variance in regard to the latter. Entrepreneur B referred to aspects of symbolic/expressive value three times. First the entrepreneur mentioned that the name of the product is meant to involve the image of activity, which is hopefully associated with the product itself. Secondly, the product allows for users to engage in self expression, and finally individuals retain ownership of their pictures which should mitigate the worry that images could be appropriated. However, Entrepreneur A and C only made one comment each that is attributed to symbolic/expressive value. In the case of Entrepreneur C in particular, the comment was a negative assertion that image and brand are unimportant to the success of the product. Entrepreneur D made no comments at all that are

Entrepreneur C – Customer Value Framework – Table 3

Sources of Value	Functional/Instrumental Value	Experiential/Hedonic Value	Symbolic/Expressive Value	Cost/Sacrifice Value
Information				
Products			Image and brand isn't viewed as important	Students subjected to advertising
Interactions	Aggregates students for employers	Product is not customizable for students	Free for students	Free for students
Environment	Brings together students and employers			
Ownership/Possession Transfer				Data mining and business to business sales

attributed to this value.

Entrepreneurs C and D each made two comments attributed to Functional/instrumental value, while Entrepreneurs A and B each made only one comment. This would imply that functionality may be the least recognized value over all, as it has the least amount of emphasis, when one considers that every other category had one instance when at least one entrepreneur made three comments that can be attributed towards it. That being said, it should also be noted that each entrepreneur made at least one comment about functional value, while symbolic value did not have any comments attributed to it in Entrepreneur D's interview.

When examining which *sources* of value the entrepreneurs discussed in their interviews, a similar pattern emerges of particular sources taking precedence over others. Overall, the products themselves were the most often cited source of value. Entrepreneur B cited it as the source of all four values; Entrepreneur D cited it as the source of three types of values; and

Entrepreneur D – Customer Value Framework – Table Four

Sources of Value	Functional/Instrumental Value	Experiential/Hedonic Value	Symbolic/Expressive Value	Cost/Sacrifice Value
Information				
Products	Ties interactive and other media together Searchable	Product creates richer interaction between user and media		There is a learning curve to the product
Interactions	Technology is implemented into the media players of business partners			Business partnerships builds credibility
Environment				
Ownership/Possession Transfer				Business partnerships keep costs down

Entrepreneurs A and C made comments referring to products as the source of two values. On the other side of the scale, none of the entrepreneurs emphasized the environment as a source of value. Entrepreneur A only saw it as a source of experiential value in the sense that Product A creates a network that brings people together. Entrepreneur B saw the environment playing a role in the experiential value of their product as well, as the recording of time and place situates users within the world around them. Entrepreneur C noted that a function of Product C is that it is a meeting place for students and employers, which also refers to environment as a source of value. In this instance, it was decided to be a source of functional rather than experiential value, as unlike Product A, which is attempting to foster discourse, this meeting environment is for the more functional purpose of conducting labour transactions. Finally, Entrepreneur D did not make any comments that could be attributed to referring to environment as a source of value in any way.

These results suggest that when digital media entrepreneurs talk about value they are most likely to talk primarily about cost/sacrifice value. This was the only value that could be applied to the majority of the sources of value in the customer framework analysis for all of the entrepreneurs. This would imply that while digital media entrepreneurs may not necessarily talk about cost/sacrifice value initially when discussing a product, it will be discussed equally or more so than any other value. There also did not appear to be a trend in terms of what other value an entrepreneur might discuss. While symbolic/expressive value was the next most talked about value in general, it was not given the same emphasis by every entrepreneur, as Entrepreneur D did not address this value at all.

In addition to this, the results of the analysis show that for each entrepreneur there was at least one value and one source of value that was clearly talked about to a lesser extent than other values or sources of value. In some cases, this is quite striking. For example, with Entrepreneur D, comments from the interview could not be attributed to symbolic/expressive value in any way, or to information, or environment as a source of value, and only to ownership as a source of cost/sacrifice value. As mentioned previously, the values that received less of an overall emphasis from the entrepreneurs were functional/instrumental value and symbolic/expressive value. The sources of value that received the least amount of prominence were information and environment.

Finally, it is significant to note that within the area of ownership/possession transfer as a source of cost/sacrifice value, each entrepreneur suggested some form of business to business sales model. This suggests that digital media entrepreneurs do not view the end user as taking part in the business transaction. Thus, there almost needs to be two sets of customer values, one

for the primary user and one for the client business that is purchasing the products in order to have a more complete picture of customer value.

Implications

These findings have several theoretical implications. First, it is worth reiterating that the entrepreneurs primarily talked about cost/sacrifice value. As stated previously, cost/sacrifice value is the negative value associated with a product including anything that a customer gives up, including financially, when using a product (Smith & Colgate, 2007). In other words it is the exchange value of a product as this is what the customer exchanges for it. As such, the fact that these entrepreneurs preferred to talk about this value means that they are undertaking a process of commodification with these products. This is an ongoing process as exchange value would not fully exist until a transaction occurs, yet the process is clearly underway as a focus on exchange over other use forms of value (the other categories of customer value) has been identified.

The prevalence of cost/sacrifice value in the result of the interviews for all the entrepreneurs may be due to several factors. First, it may have been influenced by the fact that three of the four entrepreneurs are either students or alumni of university business programs. This means that they have had significant exposure to sets of cognitive frameworks and scripts for discussing and thinking about business processes including the commodification process. As it has been argued, prior knowledge including academic knowledge is a key factor in the identification of entrepreneurial opportunity (Shane, 2000). Secondly, all of the entrepreneurs expressed that one of the significant advantages of operating within the Ryerson DMZ is the ability to collaborate and receive instant feedback from anyone else in the DMZ. If three of the four entrepreneurs interviewed were influenced by their prior academic experiences and

knowledge, it is likely the case that the other entrepreneurs are also being influenced, as has been observed elsewhere in entrepreneurs (Ozgen & Baron, 2007). Finally, it was necessary for these entrepreneurs to submit a business plan for review in order to gain admittance to the DMZ. This placed a focus on exchange value for these entrepreneurs even before they began operating within the DMZ; if they were unable to discuss cost/sacrifice value their applications would likely have been denied.

Second, within the category of cost/sacrifice value all four entrepreneurs discussed a business to business sales model to earn revenues. Not only does this imply commonality in the ways in which these entrepreneurs talk about cost/sacrifice value, but it has also been observed that they seen this value as to be exchanged with other businesses rather than the end users of the products. For political economists, this suggests that these entrepreneurs are first and foremost concerned with commodifying their user-audiences. This supports Smythe's (2006[1981]) argument that audiences are the primary commodity of media. It should be noted that the choice to make audiences the chief commodity has occurred early in the entrepreneurial process. It is impossible to pinpoint when this has occurred exactly, however as mentioned, all of the entrepreneurs were required to submit a business plan to the DMZ in order to gain entry. This again implies that the policy of the DMZ to require submission and approval of business plans may be influencing the decision of the entrepreneurs to focus on commodification of the audience, as opposed to the commodification of content or other forms of commodification.

The considerable variance between how each of the entrepreneurs discussed the other forms of value also contains theoretical implications. It supports entrepreneurial cognitive theory that knowledge scripts could be culturally based in the variance shows different entrepreneurs do

not talk about all value in the same way. The cause of this may be because these entrepreneurs have not made a distinction in their comments about customer value between the values for the end user and the values for the businesses they are selling their products to. While these values can theoretically be one and the same, in some cases they are not and the lack of distinction made by the entrepreneurs is certainly relevant.

Limitations

This research study was designed as an exploratory study. While it does suggest that there may be significant patterns in the way in which digital media entrepreneurs talk about value, the sample size of this study is too small to be conclusive. For a more robust study, it would be necessary to examine a larger digital media incubator, or several digital media incubators. As is, it is impossible to know whether the results of framework application are merely specific of the four individuals interviews, indicative of all those whom are operating within the DMZ, or digital media entrepreneurs in general.

In addition to this limitation of interview sample size is a limitation to the manner of the interviews and application of the results. This methodology of conducting open ended interviews and then applying the results to the framework was done to help offset biases in self-reported data that Shane (2000) notes when interviewing entrepreneurs. However, this has opened up the possibility of bias on my part as author to creep into the study. This has been mitigated as much as possible through critical reflection on the analysis but there is room to improve the methodology to allow for a middle ground between the subjective analysis of the interviewee and the subjective analysis of the researcher.

Finally, this study is limited to analyzing customer value through the discourse of interviews. While this is a legitimate methodology of research, it would have been beneficial to incorporate other documents such as the entrepreneurs' market research and business plans. This would allow for further evidence on how customer value creation is discussed and what steps are taken in the process of commodification.

Contribution to Research

While there are limitations to the results of an exploratory study, these results if corroborated hold significant implications for research in the fields of customer value, entrepreneurship and political economy of communications. With regards to customer value research within marketing studies, this study offers validation that Smith and Colgate's (2007) customer value framework is applicable to academic research in general and to entrepreneurial research specifically. Smith and Colgate assert that the framework could be used to assess customer value creation strategies through content analysis and this study also shows that interviews are an acceptable source of such content for analysis. In addition, this study opens the door to further analysis of customer value creation in entrepreneurship. As previously mentioned, while Smith and Colgate (2007) state that entrepreneurship is one of the two ways in which customer value is created; their theoretical framework does not address the unique nature of entrepreneurship, as they assert that is it observed through the customer experience which does not exists in all entrepreneurial experiences. While the theoretical implication of how value creation occurs within an entrepreneurial enterprise, this study does demonstrate that it can in fact be measured at a practical level.

This study also has important implications for research in entrepreneurial studies. Firstly, the finding of this study that cost/sacrifice value is the primarily identified value lends credence to Mitchell, Smith, Seawright and Morse's (2000) assertion that ability scripts, that include the evaluating of the specific potential of an opportunity play a definite role in the entrepreneurial process. This study cannot conclusively speak to their claim that ability scripts tend to be culturally specific, however it can also be noted that the greatest deviation in terms of talking about customer value and sources of customer value was in Entrepreneur D's interview. This entrepreneur was the one with the most distinct background, having not attended a business program, but rather a computer engineering one.

Secondly, this study gives evidence to the role that informal industry networks and mentorship play in engaging prior knowledge and cognitive structures in the exploitation of an opportunity (Ozgen & Baron, 2007). In their interviews, all entrepreneurs spoke of the value of the DMZ in regards to helping them shape their products. Entrepreneur A acknowledged that they have been provided with the mentorship of outside usability experts. Entrepreneur D suggested that the ability to have instant user feedback within the DMZ is a great developmental aid. In addition to this, the Director of the DMZ remarked that Ryerson has helped facilitate frequent tours and events at the DMZ with a variety of community members, including investors, government officials, Ryerson personnel and other digital media firms (personal communication, July 22, 2010). This heavily suggests that Ozgen and Baron's (2007) assertions that informal networks and mentorship play key roles in shaping an entrepreneurial opportunity, as the findings of this study suggest that these mentors and informal networks have resulted in the entrepreneurs favouring cost/sacrifice value, while deemphasizing at least one other type of value.

That this study gives weight to the arguments of Mitchell, Smith, Seawright and Morse (2000) as well as Ozgen and Baron (2007) has some strong implications for researchers of the political economy of communications. There appears to be a correlation between the experiences of the digital media entrepreneur operating within the DMZ and how these entrepreneurs talk about value. Whether intentional or not, all of the entrepreneurs either had an academic background in business or expressed a strong affinity for and personal experience with it. This, combined with the similar comments the entrepreneurs made on how the DMZ has impacted their products, suggest that the DMZ is playing a role in shaping the values that are being produced in these products. While the stated purpose of the DMZ is to create opportunity for digital media entrepreneurs and for Ryerson students, there is a homogenous element to the opportunities available within it. The Director of the DMZ acknowledged that it is open to projects with either business or social value, but there have been no applications admitted as of yet on purely social grounds (personal communication, July 22, 2010). Again, suggests that whether consciously or unconsciously, support mechanisms and social institution policies, such as those of the DMZ, help shape the behaviour and content of media (McChesney, 2000: 110).

One of the ways in which it appears the policies of DMZ is shaping the behaviour and content of the media products being produced within it is in the decision of the entrepreneurs to sell their products to other businesses as opposed to end users. It has been argued that the academic background of three of the four entrepreneurs and the work experience of all of them has contributed to this choice of business model. This factor of work and academic history must also be weighed against other factors including the impact of the necessary business plan for admittance into the DMZ as a member. This business to business sales models being developed by these entrepreneurs entails the derivation of value from the attraction of users to these media.

The primary mode of commodification for these entrepreneurs, therefore, is the commodification of audiences. This is in line with the argument of Smythe (2006[1981]), that the commodification of audiences is central to all media.

What this study has aimed to demonstrate is how the commodification processes occurs and is influenced throughout the various steps of said process. What begins as an idea for a product is shaped through formal discussions, such as the necessary submission of a business plan to join the DMZ, and through informal discussions, such as the daily feedback that members of the DMZ offer one another. These discussions, combined with the specific work and academic experiences of the entrepreneurs, have resulted in a focus on cost/sacrifice value for their products. Moreover these prior experiences and ongoing discussion at the DMZ have resulted in the choice by these entrepreneurs to engage in a commodification of the users of their products- their audiences- in order to generate a profit. .

Future Directions

As an exploratory study, this research suggests that a more thorough examination of how digital media entrepreneurs talk about value can add to theoretical and practical knowledge of communications, marketing studies and entrepreneurial studies. As stated previously the sample size used here should be significantly expanded to give stronger credibility to the notion that digital media entrepreneurs predominantly talk about cost/sacrifice value, and do not talk about all values equally. Additionally, further study would help shed light on whether this trend is location specific to the Ryerson Digital Media Zone, which would reaffirm the correlation between the policies and practices of the DMZ and the values that the entrepreneurs discuss.

Conclusion

This study has shown that when digital media entrepreneurs at the Ryerson Digital Media Zone talk about value they tend to talk about it in terms of cost/sacrifice value, followed by experiential value. As individuals they also tended to have at least one value, if not two, that they talked about to a significantly lesser degree than other values. Additionally, they gave a similar emphasis to some sources of value over other sources. Generally speaking this involved prioritizing the products themselves as a source of value and diminishing information and environment as sources. These findings lend support to Smith and Colgate's (2007) customer value framework as a worthwhile tool for content analysis. The findings of this analysis, combined with the entrepreneurs responses on the support of the DMZ in their endeavours also backs up prior research in entrepreneurial studies as to the existence of cross-cultural entrepreneurial cognitive scripts (Mitchell et al, 2000) and the key role of information networks and mentors (Ozgen & Baron, 2007). Finally, through these findings the study suggests that the structure and practices of the DMZ itself plays a key role in shaping the process of commodification through how the entrepreneurs within in choose to talk about value. Specifically, they demonstrate that the four interviewees have chosen their products' audiences to be the primary commodity for sale. As the DMZ requires a business plan assessment in order to apply for admittance, it is reasonable to infer that this has impacted upon said decision to engage in audience commodification. Taken as a small part this business plan, along with personal history including education, and interactions with other members of the DMZ help make up the micro-foundations of commodification that result in DMZ entrepreneurs that are able to primarily talk about cost/benefit values.

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