CONSUMER CREATIVITY AS A JOURNEY TOWARD A MORAL DESTINY: AN INVESTIGATION OF THE FREE/OPEN SOURCE SOFTWARE COMMUNITY

by

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Abstract

Drawing on Berman's (1972, 1988) political-cultural view of creativity, this thesis contextualizes consumer creativity in the context of a consumer community wrought with paradoxes and conflicts. Adopting a netnography methodology and empirically examining how individual free/open source software (FOSS) community members interpret their own creative activities, this thesis finds that consumer creativity is a journey toward a moral destiny, with morality arising from the interplay between rationalism and Romanticism and the cultural, historical baggage of these two ideological systems (e.g., sexism in the domains of science and art). Along this journey, individual FOSS community members (i.e., FOSS programmers) co-create and negotiate their common identity—a craftsperson who is a scientist, artist, and moral warrior, an identity embodied by FOSS, their creative product and a form of technology.

This journey is both sweet and bitter and full of paradoxes and conflicts, all of which have rich implications about the power relationships within the community. On the one hand, FOSS programmers recreate a mythologized paradise where they re-merge with the natural world and return to human nature and where they are re-actualizing the moral values of freedom, public interests, and egalitarianism. On the other hand, in this community, sexism against female programmers is rampant; some programmers could perceive that their creativity is constrained and exploited by powerful project owners and thereby feel alienated, frustrated, and trivialized; individual programmers could confront each other due to their different technological preferences and doubt each other's motivations; and this community's creative process is infused with politics.
This thesis (1) enriches the marketing literature on consumer creativity which is dominated by an instrumental perspective of creativity by introducing the moral dimension of consumer creativity; (2) contributes to the marketing literature which is dominated by the view that the creative process is enjoyable and harmonious by examining paradoxes and conflicts in the creative process; and (3) enriches the marketing literature on the impact of technology on human well-being and the natural environment by illustrating a contextualized view that the impact of a technology depends on the moral values of the creator and the user of this technology.
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Chapter 1

Introduction

How pastoral consumer creativity can be! It is found that, in many consumer communities, consumers connected by the Internet engage in wild brainstorm activity and freely share their ideas although most of them have never met and would never meet with each other in person. These consumers stay up late night after night or spend numerous weekends contributing to their common consumption objects such as sport shoes, free/open source software (FOSS), or a Wiki project. They work arduously and unselfishly just for fun and communal reputation. They work autonomously and reject any imposed-upon tasks and deadlines. But, together, these loosely connected consumers often create products that beat competing commercial offerings in terms of creativity and product release speed.

Companies rush to collaborate with these creative consumers. Some companies enthusiastically set up online communities for their consumers, generously provide free toolkits for consumers to experiment with their creative ideas, and gratefully and publicly recognize consumers who contribute great ideas to their communities. Some companies also delegate employees to their sponsored consumer communities to facilitate consumers’ creative activities. In turn, these communities allow their ideas to be freely integrated into new products or marketing communications by these companies. Both parties contribute to the economic value reaped by the companies and the utilitarian and symbolic values enjoyed by the consumers. Both parties win happily.

A turn of consumer creativity in marketing theories and practices is emerging (Prahalad and Ramaswamy 2000; 2003; 2004; Vargo and Lusch 2004; Sawhney, Verona,
and Prandelli 2005; Berthon, Hult, and Pitt 2005; Berthon, Pitt, McCarthy, and Kates 2007; Berthon, Pitt, and Campbell 2008; Ramaswamy 2008; Nambisan and Nambisan 2008). In the current literature on consumer creativity, two different streams of studies are located along a continuum anchored by individualistic creativity (IC) on one end and contextualized creativity (CC) on the other (Sawyer 2006; Paulus and Nijstad 2003; see Figure 1-1).

**Figure 1-1**
**The Continuum of Creativity**

The first stream sees consumer creativity as a largely isolated, individual process (Bagozzi and Foxall 1996; Burroughs and Mick 2004; Moreau and Dahl 2005; Dahl and
Moreau 2007; Heiskanen, Koskinen, Repo, and Timonen 2006). The second stream sees consumer creativity as a contextualized process, assuming that a community of individuals collaborates towards a creative project (von Hippel 2005; Gloor 2006; Kozinets, Hemetsberger, and Schau, 2008). Despite this difference, both streams assume that creativity is an enjoyable, beneficial, harmonious process free from conflicts. However, a consumer creativity context such as a consumer community could be full of ongoing, dynamic paradoxes, conflicts, and ideological struggles in addition to collaboration. Thus, we still need to further contextualize consumer creativity by placing it into a more dynamic context.

Most marketing researchers see consumer creativity as an enjoyable and harmonious process. Among the studies seeing consumer creativity as an isolated, individual process, there are at least three different views: the personality trait view, the psycho-social view, and the political-cultural view. To different degrees, these views implicitly assume that isolated individual consumers engage in enjoyable creative activities free from the impact of the dynamics of relevant communities. Among the studies seeing consumer creativity as contextualized in various consumer communities, there are at least two different views: the sociocultural view and the psycho-social view. Both views implicitly and/or explicitly assume (1) that individuals’ creative processes are embedded in communities and influenced by group processes as well as social and cultural contextual factors, and (2) that consumer creativity is free from political, social, and cultural constraints. Despite their different assumptions, all five views suggest that the creative process is full of enjoyment and that individual consumers in a consumer community harmoniously collaborate with each other in their creative process.
However, Berman’s (1972, 1988) political-cultural view of creativity suggests that consumer creativity is an ongoing, dynamic, community-based process that is rich in paradoxes, conflicts, ideological struggles, and political implications concerning the distribution of authority, power, and status in a consumer community and in a society. Specifically, at the individual level, individual community members might experience intrapersonal paradoxes (e.g., holding the values of both egalitarianism and elitism). At the community level, there might be competition among collaborating individual members, ideological conflicts between collaborating subgroups of a consumer community, and conflicts between individual members and the community as a whole. At the society level, there might be competition and ideological conflicts between a consumer community and dominant corporations and the ideological conflicts between a consumer community and copyright laws. So the process of consumer creativity might be regarded as characterized by paradoxes, conflicts, and ideological struggles in addition to collaboration.

Drawing on Berman’s view as my theoretical lens, I aim to contribute to the literature on consumer creativity by empirically examining the creative process of individual members within the free/open source software (FOSS) community that is fraught with various conflicts. I seek to contextualize consumer creativity by considering the conflicts inherent in the creative process and to answer the following general research question: How do we come to understand consumer creativity in a context wrought with paradoxes, conflicts, and ideological struggles? Specifically, the following questions guide my research: (1) How do individual consumers interpret their quest for creativity (e.g., their motivations, creative process and products)? (2) How do individual consumers
negotiate the self-expressive aspects of creativity in the face of social judgment within their community and in society? (3) How do individual consumers interact with each other and with companies to build their identity in their creative process? (4) What are the political and cultural dynamics and implications of consumer creativity?

Because the studied paradoxes, conflicts, ideological struggles, and political and cultural meanings are sensitive to social, cultural, and situational contexts, this thesis adopts a netnography methodology (Kozinets 2002a). Data were collected from the publicly available online archives of consumer narratives of selected FOSS websites, e-mail, phone and/or personal interviews, and blogs, articles, books, and published interviews of some FOSS community leaders and common FOSS programmers. Analysis and interpretation follow a constant comparative method to seek patterns of meaning or to formulate themes (Glaser and Strauss 1967; Spiggle 1994).

This thesis contributes to the literatures on consumer creativity by further contextualizing consumer creativity into a context full of paradoxes, conflicts, and ideological struggles. Specifically, this thesis has three key findings. (1) This thesis finds that consumer creativity is a journey toward a moral destiny, on which consumers build their identity. This finding enriches the current literature on consumer creativity which is dominated by studies that focus on the technological dimension of consumer creativity. (2) This thesis finds that, in the context of the FOSS community, morality arises from the interplay between rationalism and Romanticism, and the cultural, historical baggage that comes from these two conflicting ideological systems. Such ideological interplay partially contributes to three levels of conflicts which consumers experience in their community-based creative process. This finding expands our understanding of the
ideological roots of consumer creativity and clarifies the contested nature of creativity. (3) This thesis finds that technology is a reflection of the moral values of the creator and the user of this technology. This finding complements previous studies on technology consumption that propose that technology is either a divine tool or a destroyer of traditional ways of life. This thesis suggests that consumer creativity involves dynamic paradoxes, conflicts, and ideological struggles at individual, community, and society levels and has rich political implications.

In Chapter Two, I briefly review the psychology literature on creativity and the marketing literature on consumer creativity to outline our extant knowledge about the concepts of creativity and consumer creativity. With this background knowledge, in Chapter Three I develop Berman's view of creativity, which serves as the theoretical lens of this thesis. This conceptual development is followed by an explanation of my research methodology (Chapter Four) and findings (Chapter Five). The thesis is concluded by a discussion of the findings, managerial implications, limitations, and future research directions (Chapter Six).
Chapter 2

Review of Literatures on Creativity and Consumer Creativity

Because previous studies on consumer creativity in the marketing literature are greatly influenced by the studies on creativity in the psychology literature, this literature review starts with some theories of creativity in the psychology literature, and then moves to the theories of consumer creativity. There are three main conclusions of this literature review. First, compared with other disciplines, creativity is understudied in the marketing discipline. Second, previous studies on consumer creativity tend to focus on isolated individuals’ creative activities. Third, the few studies that examine consumer creativity in the context of consumer communities are dominated by the psycho-social and sociocultural views and assume that the community members harmoniously co-create value with each other and with companies. One gap that needs to be filled is to study consumer creativity in a community full of paradoxes, conflicts, and ideological struggles, exploring the impact of these dynamics on consumer creativity.

The political-cultural view of creativity has rarely been applied in the marketing literature on consumer creativity in the context of consumer communities. So, in Chapter Three, I will draw on Berman’s (1972, 1988) view of creativity (which suggests that consumer creativity is an ongoing, dynamic, community-based, process that is full of paradoxes, conflicts, and ideological struggles and abounds with political and cultural meanings) as my theoretical lens to develop a framework of consumer creativity in a dynamic consumer community.
2.1 Creativity in Psychology Literature

In the extant psychology literature, creativity has been conceptualized as (1) a *capacity* and a *process* of generating something new and appropriate and (2) a *process* of *self-development, self-actualization, and self-expression*. According to the first conceptualization, the dominant one in the psychology literature, creativity can be defined as the capacity and process of producing, conceptualizing, or developing ideas, processes, procedures, or solutions to problems that are novel (i.e., unexpected and original) and appropriate (i.e., with high quality, functionally workable, legally and culturally legitimate, and socially and aesthetically valuable) (Csikszentmihalyi 1999; Sternberg, Kaufman, and Pretz 2002; Sawyer 2006; Finke, Ward, and Smith 1992). This definition focuses on the capacity to create something new and the process of using this capacity in specific social and cultural contexts. Under the second conceptualization, creativity can be defined as a process of actualizing and expressing one’s self (e.g., one’s core values, beliefs, goals, desires, experiences) in novel ways. This second definition focuses on a critical motivation underlying creativity—self-actualization (Maslow 1968; Conti and Amabile 1999). People are, consciously or unconsciously, motivated to engage in creative processes; this means that these two definitions are not necessarily conflicting but complementary with each other. With this conceptual frame, we may tentatively define creativity as a process in which individuals or groups develop, actualize, and express their senses of self by producing, conceptualizing, or developing innovative and appropriate ideas, practices, processes, procedures, or solutions to problems.

In the following sections, I will first briefly review the history of the concept of creativity, and then review four different views of creativity in the psychology literature:
the personality view, the cognitive view, the biopsychosocial view, and the group view (see Dacey and Lennon 1998, Runco 2004, and Sternberg and Lubart 1999 for detailed reviews of the psychology literature).

2.1.1 History of the Concept of Creativity

Our understanding of creativity has evolved historically (Pope 2005). In the long European history before the Renaissance, it was widely believed that creativity was inspired by God. Creativity was conceptualized as divine inspiration rather than a capacity or self-actualization or self expression of individuals or a group of individuals. In the 16th century when religions were losing their authority, people began to see their own rights and capacities to make decisions related to their own life. Creativity was gradually isolated from God and major inquiries about creativity of human beings emerged. In the 16th century, creativity was conceptualized as individuals’ capacity that was related to some inheritable traits; but, the sense that creativity has a mystical spiritual flavor persists in the minds of many modern individuals.

In the 18th century, it was widely believed that creativity was a potential for every individual and that this potential and its exercise depended on the political atmosphere at the time (Dacey and Lennon 1998). In this era, there had been a great debate between rationalism and Romanticism (Sawyer 2006). “Rationalism is the belief that creativity is generated by the conscious, deliberating, intelligent, rational mind; Romanticism is the belief that creativity bubbles up from an irrational unconscious, and that rational deliberation interferes with the creative process” (Sawyer 2006; p. 15). Since Aristotle, many scholars have emphasized the rational aspects of creativity. But with the spread of
humanism brought about by the Renaissance movement, many scholars emphasized non-rational aspects of creativity. For Romantics, creativity was conceptualized as spontaneous self-expression and a way of identity-building. The current psychology literature has truncated this debate by arguing that creativity consists of both rational and non-rational elements (Dacey and Lennon 1998).

Throughout the 19th century, the conceptual shift from divine inspiration to human capacity and/or self-development and self-expression continued. In this era, one major debate was between the associationist and Gestalt views about how a creative individual searches for knowledge. The associationists argued that individuals get knowledge about a problem from its parts or elements to the whole. Galton (1879, see Dacey and Lennon 1998) proposed that the conscious mind is full of logical thoughts, each of which follows each other in an orderly way and is connected to or associated with those in the unconscious mind by threads of similarity. In contrast, the gestalt psychologists contended that a creative individual seeks knowledge from a sense of the whole problem to its parts. A gestalt is a mental pattern or form that consists of various elements but the whole gestalt is greater than the sum of the elements. Creative thinking comes from forming and changing gestalts. For gestaltists, being creative is not merely associating ideas in new and different ways but seeing an existing gestalt in entirely new ways. Here, creativity reflects seeing existing phenomena with new perspectives. The current cognitive theories usually combine these two views (Dacey and Lennon 1998).

Another debate in the 19th century was about the relative contributions of nature (i.e., biological factors) or nurture (i.e., environmental influences) to creativity. In the 19th century, there was great advancement in knowledge about the biology of the brain, and
brain biologists generally believed that genetic inheritance decides creative ability. James (1880, 1890; see Dacey and Lennon 1998) challenged this belief by arguing that environmental factors (e.g., parents’ philosophy) have greater impact on individuals’ creativity. Like Galton and Freud, James also linked creativity to one’s unconsciousness as well as consciousness, pioneering the psychological research on creativity.

2.1.2 The Personality View of Creativity

The extensive research on creativity was initiated by psychologists in the 20th century (Sawyer 2006). Two streams of research emerged in the early 20th century and their development continues today: the creative personality and the cognitive processes. Some psychologists developed many insights about creativity in the creative personality field. Two basic assumptions of this research are that individuals' personality traits are fixed and that there are a set of universal creative personality traits within a domain or across domains. Among the researchers who adopted the psychoanalytic view are Sigmund Freud, Ernst Kris, and Alfred Adler (Dacey and Lennon 1998). Freud argues that creativity is a personality trait that tends to be formed within the first five years of an individual's life. Creativity results from overcoming some traumatic experiences, which usually happened in childhood and are buried in the unconscious. For Freud, a few defense mechanisms (i.e., an individual's unconscious attempts to block awareness of unpleasant or unacceptable ideas) can often lead to creative ideas. Freud emphasizes the sublimation mechanism (i.e., creative expression in some artistic pursuit is stimulated by the creator’s unconscious efforts to make up his/her inability to fulfill his/her sex drive). Different from Freud, Kris argues that the regression mechanism (i.e., a reversion to
previously successful behaviors when current behavior is unsuccessful) is more important than sublimation. For Kris, regressing to a childlike frame of mind would help one to weaken the barriers between the unconscious and conscious mind, and thereby aiding in the retrieval of some ideas in the unconscious, leading to fresh and innovative perspectives on a problem. Adler emphasizes the importance of the compensation mechanism (i.e., “an attempt to make up for a consciously perceived inadequacy by excelling at something else,” Dacey and Lennon 1998, p. 37). For example, if one knows that one cannot develop excellent software now, one can make extra efforts to become an excellent software tester.

Attaching less importance to the unconsciousness than these psychoanalytic psychologists, some other psychologists such as Abraham Maslow and Carl Rogers hold a humanism view on creative personality. Maslow (1968) proposes that creativity is a healthy reaction to the environment and human beings have the need for self-actualization (i.e., the desire to realize one’s potential). Maslow (1968, p. 137) calls creativity in self-actualized people “self-actualizing (SA) creativiness,” which is widely displayed in the ordinary affairs of life and originates from these people’s personality. Self-actualizing creativiness is characterized by being uninhibited, spontaneous, freely self-expressive, curious about anything, and free from any stereotypes and rigid mental frames, and by being able to integrate conflicting or contradictory ideas and/or information about one’s world and one’s self. For Maslow (1968), approval and acceptance of one’s deeper self makes it more possible for one to be more creative—to bravely perceive the nature of the world, to make one’s behaviors spontaneous, to unite contradicting ideas about the world and one’s self, and to be freely expressive. Maslow
(1968) suggests that creativity and the creative process are closely related to one’s sense of self and identity because self-expressiveness is one key component of self-actualization (Berman 1972; Trilling 1972; Taylor 1989, 1992). Similar to Maslow, Rogers emphasizes the personality trait of openness to experience, which means being open to fresh ideas and accepting conflicting information (Dacey and Lennon 1998). More recently, researchers have developed lists of creative personality traits such as being autonomous and able to resolve and accommodate apparently opposite or conflicting traits within oneself (Baron and Harrington 1981; Feist 1998).

While enlightening us about the characteristics of creative individuals, these studies on creative personality traits have several limitations. First, the tests of creativity that are based on creative personality research cannot differentiate people who truly hold specific creative personality traits from those who pretend to hold these traits (Sawyer 2006). In addition, although some tests on creativity correlate with creative achievement, these tests might correlate with all achievement. Personality psychologists have not found that personality traits can distinguish creative people from ordinary people. In fact, by 1980, personality psychologists had begun to doubt the validity of measuring creativity with a personality test (Feldhusen and Goh 1995; Weisberg 2006). One possible reason for the failure of creative personality research might be that an individual could have multiple, dynamic, contextualized, and contradictory personality traits suggested by the contemporary social psychology literature (Sedikides and Brewer 2001). This view of personality traits conflicts with the two assumptions of most creative personality studies.
2.1.3 The Cognitive View of Creativity

In the 1970s a group of psychologists began to research the cognitive processes in creative activities, trying to explain creativity by showing how it emerges from ordinary, everyday mental processes—cognitive abilities that everyone has, the same ones that are used in noncreative activities (Sawyer 2006). These cognitive theories have come to explore the processes in which individuals use creative metaphors, analogies, and mental models, combine and expand concepts in the mind and thereby create new ideas, and engage in creative problem-solving (Ward, Smith, and Vaid 1997). It is assumed that creativity is a result of subsets of these and other processes to produce new conceptualizations and knowledge based on existing knowledge in a given domain. Most of the studies adopting this view employ the experimental approach to study the cognitive processes of creative problem-solving, which are characterized by controlled environments, quantitative measurement, and cognitive task analysis (Mayer 1999). Some other studies adopt a computer simulation approach, assuming creativity as a process of mental computation and using the tools of artificial intelligence (Boden 1994).

It is generally agreed that the creative process has four sequenced basic stages: preparation, incubation, insight and verification (Dacey and Lennon 1998). Preparation is the stage of collecting information about the problem to be solved. To be creative in one activity or solving a problem, an individual must gain sufficient domain-specific knowledge. Incubation is a delay between preparation and insight stages (Sio and Rudowicz 2007). In this stage, the problem solver at least temporally gives up conscious effort and the prepared materials are internally elaborated and organized. Mental elements are combined and insights might occur when certain combinations emerge into
consciousness. Some researchers contend that such combinations are random but most psychologists argue that combinations are guided unconsciously below the level of consciousness. In this stage, engaging another seemingly unrelated activity might help this individual gain some new ideas from this activity, which might facilitate solving the focal problem. *Insight* or *illumination* is the stage in which the problem solver suddenly experiences a new idea about or solution to the problem. *Verification* is the stage of evaluating the worth of the insight and elaborating it into its complete form. The problem solver needs to apply the insight to solve the problem and might make several revisions of the raw insight when elaborating the insight into a final solution.

This four-stage model has been criticized as too linear. Cycles of the four stages and back-and-forth movements in creative activities such as designing and painting are not unusual. Furthermore, this model places emphasis on the final solution, ignoring that an insight or a solution might lead to more important and creative questions that ask for more information and insights about solutions. In fact, asking creative questions (a more proactive creative activity) is at least as important as creatively solving a problem (a reactive creative activity) (Runco 2004). Many studies also show that the mythical insight stage that is often under the surface of consciousness might be supported by long time conscious hard efforts in a specific domain and result from a connected, directed, rational process (Weisberg 2006). The insight suddenly experienced often comes from accumulated mini-insights.

More importantly, these two streams of research just reviewed, creative personality research and creative cognitive process research, are mainly individualistic-oriented in that they focus on individual factors (whether personality traits or individual
cognitive processes) without exploring the impact of contextual factors on creativity and the creating process. However, all individuals’ activities including creative activities are conducted within and affected by their social and cultural contexts as well as other situational factors. This theoretical gap is filled by the context-oriented research that explores the impact of social, cultural, and physical environments (Sawyer 2006). Due to the research goals of this paper, I only review some theories that focus on the social and cultural environmental factors.

2.1.4 A Biopsychosocial View of Creativity

Unsatisfied with the studies that narrowly focus on biological factors, personality traits, or cognitive processes, some researchers developed a biopsychosocial view of creativity (Findley and Lumsden 1988; Dacey and Lennon 1998; Sternberg and Lubart 1995). A basic assumption of this view is that all biological, psychological, and social factors play a role in every creative act. The biological factors include intelligence (Guilford 1968), brain development, temperament, physical development, health, puberty, etc. The psychological factors include personality, information processing, problem solving, motivation, perceptual development, language development, moral development, self-efficacy, etc. The social factors include the family’s socioeconomic background, sibling relationships, education, media influences, cultural background, work environment (e.g., perceived freedom and autonomy, good role models, and resources) (Amabile and Gryskiewicz 1989; Witt and Beorkrem 1989), political environment, etc. According to Dacey and Lennon (1998), biological, psychological, and social factors interact with each other in a dynamic manner. Due to the purpose of this thesis, here, I
only review several studies on the impacts of motivation (one psychological factor) and competition (one social factor) that affect one’s intrinsic motivations.

Motivation affects the degree of creativity of one individual in one activity (Csikszentmihalyi 1975; Amabile 1993). Intrinsic motivations are based on the innate needs for competence, enjoyment and self-determination (i.e., the capacity and need to choose and to be the determinant of one’s actions). Intrinsic motivations involve doing an activity for its inherent interest and the spontaneous affects and cognitions that accompany it. Extrinsic motivations involve doing an activity for an extrinsic reward or to comply with an external demand. Extrinsic motivations include satisfying external demand or expectation, monetary rewards, and fame. Some researchers (Deci and Ryan 1985; Ryan and Deci 2000; Getzels 1987) argued that an individual’s creativity increases with intrinsic motivations and decreases with extrinsic motivations. However, Eisenberger and Shanock (2003) find that, whereas rewards for conventional performance decrease intrinsic motivation and creativity, rewards for novel performance increase intrinsic motivation and creativity. Amabile (1993) further argues that there might exist synergy between intrinsic and extrinsic motivations in promoting creativity.

Competition is one of the factors that affect an individual’s intrinsic motivations and thereby affect an individual’s creativity (Deci and Ryan 1985). Competition can be classified into two types: indirect competition and direct competition. Indirect competition involves an individual or a group challenging a standard such as one’s best previous performance or the established performance norms for one’s ability level. Direct competition involves individuals challenging each other, with each individual aiming to maximize one’s own success and to minimize the others’ success. Indirect competition
could be self-selected and help an individual improve one's competence, and thereby maintain or enhance one's intrinsic motivation (Weinberg and Ragan 1979); but winning in indirect competition is more likely to lead to higher intrinsic motivation than losing. Direct competition among individuals would decrease their intrinsic motivations (Deci, Betley, Kahle, Abrams, and Porac 1981) and thereby decrease their creativity. This argument about direct competition is supported by some studies. Amabile (1983) finds that rewards based on competition reduce subjects’ creativity on artistic tasks. But some other studies find that direct competition could enhance individuals’ creativity in certain contexts. Brown and Gaynor (1967) find that many athletes perform better in contests with other athletes than they do in daily practicing and training. Clydesdale (2006) finds that rivals among musicians might help enhance their creativity. Sternberg and Lubart (1995) propose that whether competition facilitates or blocks creativity depends on the individual’s initial level of arousal. Competition causes anxiety and pressure. An individual who initially is not very aroused is likely to be stimulated to be more creative by competition; an individual who is already quite aroused might be overwhelmed in competition and thereby be less creative.

The reviewed studies adopting the biopsychosocial view are similar to the studies that adopt the personality view or the cognitive view in that all of them focus on individual creativity (i.e., the creative capacity of individuals) rather than collective creativity (i.e., the creativity of a group of individuals or a community). Although the studies adopting the biopsychosocial view examine the social and cultural factors affecting creativity, these studies focus on how these factors affect the creative ability and creative processes of individuals. However, creativity is linked to collective processes.
First of all, creative ideas or solutions in any domain are a result of direct or indirect interaction with others including those who contributed their insights to the current knowledge pool in that domain (Alperovitz 1994). In addition, in practice, diverse but complementary knowledge and skills are often distributed among different individuals; thus, creative solutions to complex problems or tasks often result from collaboration of a group (e.g., a jazz group, Sawyer 2003), a team (e.g., a work team in an organization, Paulus 2008), or a community (e.g., the worldwide kitesurfing community, von Hippel 2005). Furthermore, creativity is socially constructed and needs recognition from others rather than solely judged by a creator him/herself (Csikszentmihalyi 1999). In many situations, a new idea, product or solution is created by a group, a team, or a community of individuals. Thus, we need to study creativity in the context of groups or communities.

2.1.5 The Group/Collective View of Creativity

Since the 1980s, some psychologists known as socioculturalists have begun to examine creativity in the context of groups (Sawyer 2003). These psychologists draw on two assumptions: (1) individual creative processes are embedded in specific sociocultural contexts and linked to group processes; and (2) the whole is bigger than the sum of the parts, echoing the argument of the gestalt psychologists. Accordingly, creativity cannot be isolated from groups and their social structures, traditions and cultural values; and group creative activities can be more fruitful than separate individuals’ creative activities. These psychologists shift their focus from the individual to the group as the unit of analysis of creativity. A group can be a group of several people or a community that has
complex, dynamic social interactions. Group/collective creativity is a result of and the process of collaboration among members of a group/community.

This shift is dated back to Csikszentmihalyi (1988) who proposed a systems view of creativity. He assumes that creativity of a person, an activity, or the product of an activity is judged by gatekeepers in a specific community rather than the individual directly involved in this activity. His model of creativity consists of three elements: the person, the field, and the domain. The person is the individual who produces a specific product (e.g., an idea, or a solution to a problem); s/he begins the creative process by developing the idea or solution. The field, a social system, consists of some experts and arbitrators (e.g., reviewers, editors, censors) in a creative domain (e.g., software, fashion, jazz music), who make judgments on the creativity of the product according to some socially constructed criteria. If these experts agree that the product is creative (i.e., innovative and appropriate), it is then legitimatized and allowed to enter the domain, where it is preserved and disseminated to other members of the field and the community. Otherwise, it cannot enter the domain and is often forgotten and destroyed because it is not appropriate for the core members and other members of the community in this domain. The domain, a cultural system, consists of all of the created products that have been legitimated by the field and all the values, beliefs, traditions, rituals, languages, symbols, etc., shared by members of the field. A person has to internalize or learn necessary knowledge about the domain before becoming a member of the field. Usually, a person learns the knowledge by interacting with the existing members of the field. For example, after learning some knowledge about software programming from textbooks written by certain experts, a programmer develops a new program. If this program and its
developing methodology and philosophy are judged by the experts (e.g., market analysts) as innovative (e.g., using a new computing logic that is clearer and simpler than the other programs to finish a task) and appropriate (e.g., not infringing the copyright law, not conflicting with the cultural values of the software developer community, productively solving the problem), the program may get legitimate access to enough users.

Csikszentmihalyi’s (1988, 1999) model emphasizes the social construction process and the legitimization process involved in creative activities and implies a possible competition for legitimacy among individuals who develop their respective creative products (e.g., ideas, practices, processes, procedures, or solutions to problems in a specific domain) and who aim to establish their membership of the field. Due to the subjectivity of the evaluation of creativity (including freshness, quality, social value, aesthetic value, usefulness, functionality, and rightness of ideology), the field might still reject a person who views his/her own products as creative. However, Csikszentmihalyi (1988, 1999) does not explore the possible reactions of the individuals whose products are denied entry into the domain. Furthermore, he does not explain how the existing criteria are challenged and thereby changed dynamically and whether and how the field intentionally suppresses the challengers and their creative activities and ideas. His model better explains the consensus about creativity but not the emerging new interpretations of creativity—it plays down the possibility of power struggles and related discourses accompanying creative activities, which is argued by Pope (2005) and Seitz (2003). Finally, he sees the creator as an individual person, playing down the possibility of collaboration within communities.
Csikszentmihalyi (1988) has stimulated many others to study the collective creative process. The emerging literature has examined collective creativity in the settings of informal learning groups (Gardner and Rogoff 1990; Rogoff, Baker-Sennett, Lacasa, and Goldsmith 1995), artist groups (Sawyer 2003), work teams (Belasen 2000; Weick 2001; Paulus and Nijstad 2003; Nijstad, Rietzschel, and Stroebe 2006), and consumer communities (von Hippel 2005). One central argument of these studies is that sharing ideas among group members with diverse skills and knowledge can enhance collective creativity, the value of which is bigger than that of creativity of isolated individuals and the sum of individual creativity. Continuously sharing ideas and modifying the emerging collective creative products (e.g., jazz music) could lead to products that are more creative than any one member could produce alone (Nemiro 2002; Sawyer 2003). The diverse skills and knowledge found in a pool of group members could help overcome the shortcomings of any individual group members.

If the process of collective creativity can produce more creative results than that of creativity of isolated individuals, it is necessary for researchers to examine how to facilitate the possibly more fruitful collective creative process. Hargadon and Bechky (2006) find that collective creativity is triggered by four sets of interrelated activities: help seeking, help giving, reflective reframing, and reinforcing. **Help seeking** refers to the activity that an individual facing a problem-solving task seeks assistance from others in his/her group. **Help giving** refers to the activity that an individual devotes time and attention to assisting other group members (e.g., sharing one's innovative ideas with the help seekers through face-to-face communication, e-mails, or online bulletin boards). **Reflective reframing** refers to mindful behaviors of all participants in an interaction,
where each respectfully attends to and builds upon the comments and actions of others” (Hargadon and Bechky 2006, p. 489). Through reflective reframing, the participants collectively make new sense of the problematic situation, asking better and probably different questions about the problematic situation. *Reinforcing* refers to the activities that reinforce the group’s values that support individual members as they engage in help seeking, help giving, and reflective reframing. Reinforcing can result from the other three sets of activities directly (e.g., timely and sufficient help giving reinforces help seeking) and other group activities (e.g., promoting the social status of members engaging in these activities). Sharing information and building on each member’s insights lead to the emergence of collective creative solutions. In contemporary organizations, these four sets of activities are supported by information technologies. For example, in virtual teams of which members often communicate with each other through information technologies (e.g., e-mail, fax, telephone, and computer conferencing), shared database and electronic texts serve as collective memory, facilitating collective learning and creating process (Nemiro 2002; Martin, Gilson, and Maynard 2004; Webster and Staples 2006).

These four sets of activities aim to facilitate collaboration and consensus on creative solutions to problems, which is essential to collective creativity. However, collaboration does not necessarily mean giving up individual differences. Different from Stasser and Birchmeier (2003, p. 85) who emphasize “the convergent process” or the process of reaching agreement in collective creative processes, Pope (2005) contends that creative collaboration is based on respect for differences and is a dynamic process in which group or community members not only continuously update their shared knowledge pool and enhance their common creative products (e.g., ideas, practices,
solutions) but also update their shared collective self and individual selves. Creativity is a shared, ongoing process of change through exchange, which requires respecting others’ rights of expressing their own views and opinions and embracing the idea of “we” that is beyond one’s individual self. This process also recognizes and invites different views and opinions and involves both indirect collaboration and direct collaboration in terms of shared time-frame and space.

For Pope (2005), collaboration means that, through co-creating, participants of creative activities are continuously building their shared consciousness as well as their dynamic, respective distinct views and opinions. So, the creators’ selves are dynamic rather than stable; the creators co-produce their common creative product (whether it is an idea or a software program) and co-develop their common views and beliefs but still keep and develop their own unique views and opinions. Creativity is an ongoing, dynamic process of self-development and self-expression in terms of both individual self and collective self.

Pope (2005) suggests the relevance of group identity and free self-expression to collective creativity. Milliken, Barterl, and Kurtzberg (2003) argue that a stronger sense of group identity (i.e., the perceived collective identity by a group) would motivate members to make more efforts to contribute to the collective creative products. Social identity theory suggests that sharing a group identity accentuates members’ attitudinal, emotional, and behavioral similarities among group members. Such similarity increases the social attraction among group members and enhances the degree of trust among them; thus, members with a stronger sense of group identity are more likely to share their own creative ideas with other members and make extra efforts to improve the performance of
their collective creative products. Simply put, the stronger a group’s collective identity, the more likely this group is to produce more creative products.

Milliken et al. (2003) find that if members of a work group perceive that they cannot voice their ideas or opinions safely (or freely express themselves), they would have considerable concerns about potential embarrassment, rejection, or punishment from other members. In this case, they might feel their individual selves are threatened so that they might withdraw from the group or feel disinterested in the group and its tasks.

Edmondson (1999) defines psychological safety as a shared belief held by members of a team that the team is safe to take interpersonal risk. Thus, a work group or a community with low psychological safety or restricted self-expression is less likely to fully tap its skills and knowledge pool to produce creative results (e.g., innovative ideas, practices, processes, solutions to problems).

In summary, the reviewed studies on group/collective creativity suggest that creativity in many contexts is a dynamic, collaborative process that is socially constructed, involves self-development, self-actualization, and self-expression in terms of both individual and collective selves, and is affected by group processes or mechanisms (e.g., group identification, oppressing free self-expression, group punishment). While complementing the studies focusing on creativity of isolated individuals, these studies do not explore how some members of a group/community challenge the established criteria of creativity, how the field and its core members react to such challenges, how the criteria evolve, how both parties engage in power struggles and related ideological discourses, and how the individual members understand these power struggles in relation to their creative activities.
In addition, many of the empirical studies on collective creativity are conducted in well-organized group settings such as classrooms and work teams. The reviewed psychology literature cannot tell us whether the arguments of these studies hold in the context of modern loose communities where members are bonded together by shared values, beliefs, or hobbies centered around specific practices but do not know each other in the same way as the participants of these extant studies. For example, a consumer community is a group of consumers who are linked together by specific product, service, brand, or consumption practice (e.g., an online coffee gourmet community, Kozinets 2002a). These consumers rarely contact each other directly and might never meet each other, yet it is this kind of community that captures the “co-creation” process in the marketing discipline (Cova 1997). Members in a consumer community have greater freedom to leave for another consumer community than do members of a work group or class have to leave for another work group or class; the former are not or less explicitly required to be collaborative than the later. In addition, members of online consumer communities often use virtual identities that are different from their identities in real life.

By applying many research ideas of the psychology literature, the marketing and consumer research literatures extend our understanding of creativity to the domains of marketing and consumer behavior.

2.2 Consumer Creativity in the Marketing Literature

Creativity is understudied in the marketing discipline compared with other disciplines (Burroughs and Mick 2004). Usually, companies are thought to be the only creators of innovative products or services and consumers are value-destroyers of these
products or services (Vargo and Lusch 2004). This top-down view of creativity is being subverted by the emerging bottom-up view of consumers as co-creators of value (Vargo and Lusch 2004). Consumer creativity or consumer competency is regarded as an operant resource (i.e., the higher level resource that companies can use to work on other lower level resources in order to produce value needed by customers or consumers). Seeing marketing’s role as serving customers by offering value-proposals, Vargo and Lusch (2004) argue that it is only through consumers’ co-operation (e.g., usage) that value is created. So, consumers are co-creators of value.

The idea of value co-creation is attracting increasing attention in the marketing and consumer research fields. Similar to the psychology literature, in the marketing and consumer research literatures, there are two main streams of studies on consumer creativity: the first stream of studies see consumer creativity as an isolated, individual process and the second streams of studies contextualize consumer creativity in harmonious consumer communities. But, the first stream dominates the extant literatures on consumer creativity (Kozinets et al., 2008). There are at least three views of consumer creativity in the first stream: the personality trait view, the psycho-social view, and the political-cultural view (exemplified by the liberatory postmodern view and two poststructuralist views). There are at least two views in the second stream: the psycho-social view and the sociocultural view. Most previous studies on consumer creativity take a firm-centered view—consumers only play a role of assistance to a controlling firm in developing its new products or services (von Hippel 2005; Tapscott and Williams 2006) and the cultural meanings (Gloor and Cooper 2007) with a few exceptions (Pitt, Watson,
Berthon, Wynn, and Zinkhan 2006). The different assumptions and corresponding conceptualizations of these views are illustrated in the Table 2-1 and Table 2-2.
## Table 2-1

**Conceptualizations of Isolated Consumer Creativity in the Marketing Literature**

<table>
<thead>
<tr>
<th>Consumer Creativity</th>
<th>Assumptions</th>
<th>Conceptualizations</th>
</tr>
</thead>
</table>
| **The Personality Trait View** | A consumer has stable, measurable personal traits correlated to individual creativity. | 1. Consumer creativity is an isolated, individual process.  
2. Consumer creativity is an individual's capacity of generating something innovative and appropriate, which is correlated with a set of creative personality traits. |
| **The Psycho-Social View** | A consumer is a creative information processor who is influenced by multiple psychological, social, and other contextual factors. | 1. Consumer creativity is an isolated, individual process.  
2. Consumer creativity is an individual's capacity and a psychological process of generating novel and appropriate cognitive contents. |
| **The Political-cultural View** (exemplified by the Liberatory Postmodern View) | 1. A consumer is a creative producer who is embedded in and interacts with specific political, social, and cultural environments that could be both facilitating and oppressive to consumers’ creative activities for self-building, self-actualization, and self-expression.  
2. A consumer can establish and safeguard an emancipatory lifeworld outside the market system. | 1. Consumer creativity is an isolated, individual process.  
2. Consumer creativity is a political-cultural process (1) in which an individual develops, actualizes, and expresses his/her selves through creative consumption practices and (2) in which he or she needs to challenge some existing criteria of creativity and related values, traditions, and norms and thereby the existing state of distribution of authority, power, and status within a society.  
3. In certain social spaces or lifeworlds, consumer creativity is freely performed. |
TABLE 2-1  
(continued)

Conceptualizations of Isolated Consumer Creativity in the Marketing Literature

<table>
<thead>
<tr>
<th>Consumer Creativity As Isolated, Individual Process</th>
<th>Assumptions</th>
<th>Conceptualizations</th>
</tr>
</thead>
</table>
| The Political-Cultural View (exemplified by the Poststructuralist Manipulation View) | 1. A consumer is a creative producer who is embedded in and interacts with specific political, social, and cultural environments that could be both facilitating and oppressive to consumers’ creative activities for self-building, self-actualization, and self-expression.  
2. The consumer’s creative resistance is doomed because corporations can easily co-opt the creative ideas and practices of consumers. | 1. Consumer creativity is an isolated, individual process.  
2. Consumer creativity is a political-cultural process (1) in which an individual develops, actualizes, and expresses his/her selves through creative consumption practices and (2) in which he or she needs to challenge some existing criteria of creativity and related values, traditions, and norms and thereby the existing state of distribution of authority, power, and status within a society.  
3. Consumer creativity perpetuates the market system. |
| The Political-Cultural View (exemplified by the Poststructuralist Evolution View) | 1. A consumer is a creative actor who is embedded in and interacts within a dynamic consumer community, where there exist three levels of paradoxes and conflicts (individual, community, and society), which have political implications.  
2. The consumer’s creative resistant practices and the companies’ creative business practices adapt to each other. | 1. Consumer creativity is an isolated, individual process.  
2. Consumer creativity is a political-cultural process (1) in which an individual develops, actualizes, and expresses his/her selves through creative consumption practices and (2) in which he or she needs to challenge some existing criteria of creativity and related values, traditions, and norms and thereby the existing state of distribution of authority, power, and status within a society.  
3. Consumer creativity is a driving force of the evolutionary marketplace. |
TABLE 2-2
Conceptualizations of community-based Consumer Creativity
in the Marketing Literature

<table>
<thead>
<tr>
<th>Community-Based Consumer Creativity</th>
<th>Assumptions</th>
<th>Conceptualizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Socio-Cultural View</td>
<td>1. Consumers live in communities and are embedded specific social and cultural contexts.</td>
<td></td>
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<tr>
<td></td>
<td>2. Consumers are active cultural meaning creators.</td>
<td>1. Consumer creativity is embedded in consumer communities.</td>
</tr>
<tr>
<td></td>
<td>3. The results of community-based co-creating process are more creative than the sum of those of isolated, individual creative processes.</td>
<td>2. Consumer creativity is a social and cultural process, in which individual consumers collaborate with each other (1) to develop innovative ideas and solutions to their common consumption problems and (2) to create their common consumption objects, experiences, cultural meanings, and collective self.</td>
</tr>
<tr>
<td></td>
<td>4. Consumer creativity is free from any political, social, and cultural constraints.</td>
<td></td>
</tr>
<tr>
<td>The Psycho-Social View</td>
<td>1. Consumers live in communities and are embedded specific social and cultural contexts.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Consumers are creative information processors who are influenced by psychological, social, and other contextual factors.</td>
<td>1. Consumer creativity is embedded in consumer communities.</td>
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<tr>
<td></td>
<td>3. The results of community-based co-creating process are more creative than the sum of those of isolated, individual creative processes.</td>
<td>2. Consumer creativity is a psychological and social process, in which consumers collaborate with each to generate innovative and appropriate ideas and solutions to their common consumption problems.</td>
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<td></td>
<td>4. Consumer creativity is free from any political, social, and cultural constraints.</td>
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<tr>
<td>Community-Based Consumer Creativity</td>
<td>Assumptions</td>
<td>Conceptualizations</td>
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</tbody>
</table>
| The Political-Cultural View        | 1. Consumers live in communities full of paradoxes, conflicts, and ideological struggles and are embedded in specific political, social, and cultural contexts.  
2. Consumers are active cultural meaning creators.  
3. The results of community-based co-creating process are more creative than the sum of those of isolated, individual creative processes. | 1. Consumer creativity is embedded in consumer communities.  
2. Consumer creativity is a political, social and cultural process, in which individual consumers interact with each other to (1) develop innovative ideas and solutions to their common consumption problems and (2) to create their common consumption objects, experiences, cultural meanings, and collective self.  
3. Consumer creativity is a process in which individual members (1) develop, actualize, and express their respective ideal selves (both individual and collective selves) in interactions with fellow community members and (2) experience multiple paradoxes, conflicts, and ideological struggles at the individual, community, and society levels. |
correlated to some creative personality traits. One example is Bagozzi and Foxall‘s (1996) study on the scale of the adaptive-innovative cognitive style of consumers. The three factors of this scale are sufficiency of originality, efficiency, and rule governance. As for sufficiency of originality, while adapters provide a few, typically implementable solutions to a consumption problem, innovators usually propose many, even impracticable solutions. As for efficiency, while adapters are inclined to progress incrementally toward a well-defined goal, innovators tend to pay less attention to details. As for rule governance, while adapters tend to behave in socially acceptable ways, innovators challenge the rules, norms, and laws and even create their own as they like.

This view assumes that a consumer‘s cognitive style is quite stable, measurable, and unified across time and situations. But a consumer‘s cognitive style could be dynamic and a consumer could have multiple and even conflicting cognitive styles simultaneously depending on the context. This view also ignores the impacts of contextual factors such as social factors (e.g., group identification, competition and collaboration among individuals), cultural factors (e.g., cultural values of a consumer group or community), and other contextual factors (e.g., time constraint, situational involvement). In addition, the impacts of other personal factors such as affect (Russ 1993) and motivations are not considered. As the biopsychosocial view in the psychology literature (Dacey and Lennon 1998) argues, personality traits are not the only possible factor that influences individual consumers‘ creativity.
2.2.2 The Psycho-Social View of Creativity of Isolated Individual Consumers

Some researchers adopting this view conceptualize creativity as an individual’s capacity to generate novel cognitive content. It is assumed that individual consumers are information processors that are influenced by their psychological, social, and other contextual factors. It is also assumed that the creative process is a psychological process that produces innovative ideas and solutions to problems and that some psychological, social and other contextual factors affect the creative capacity and creative process (Hirschman 1980; 1983; Burroughs and Mick 2004; Moreau and Dahl 2004; Dahl and Moreau 2007; Heiskanen et al. 2006). While recognizing the effects of hereditary factors on individuals’ creativity (Hirschman 1983), these researchers seem to emphasize the effects of psychological, social, and contextual factors. Regarding psychological factors, it is found that seeking variety might induce creative consumption practices (Burns 2007). Some social factors such as education attainment, occupational status, childhood experience, and urbanization are found having impacts on individual consumers’ creativity (Hirschman 1980). It is found that some contextual constraints affect consumer creativity, too. Time constraints moderate the effects of input available (i.e., the set of inputs available to solve the problem) and input required (i.e., the requirement to include specific types of inputs in a given solution) for creative activities on the creative cognitive process (Moreau and Dahl 2004). Some consumption constraints (e.g., instructional guidance, target outcomes) might facilitate a balance between perceived competence and autonomy for consumers involved in a creative task, the two critical factors that lead to enjoyable creative consumption experience (Dahl and Moreau 2007). This view is similar to the biopsychosocial view in the psychology literature.
Hirschman (1980) defines consumer creativity as individual consumers’ capacity to generate innovative and unique ideas to solve consumption-related problems. For her, consumer creativity is closely related to a modern society where the quest for novelty and role accumulation is important. The more modern the society, the more complex the role of individuals as consumers; thus, modern individuals as consumers need to be more creative in order to perform better in consumption activities. Individuals are motivated to seek out new information. One reason for novelty seeking is that it helps the individual accumulate knowledge potentially useful in the future. Consumers who have stored more knowledge about used and unused products might be better armed to solve new consumption problems.

Role accumulation refers to the number of nonoverlapping roles the individual is performing” (Hirschman 1980, p. 289). It is assumed that when one consumer takes a new role different from his/her current role, new consumption problems might emerge. In this case, current products might be used in innovative ways to solve new problems or innovative products will be adopted. Two probable causes of role accumulation might be the desires to seek self-fulfillment and to express one’s talents. These desires and thus role changes stimulate consumers to creatively use currently used products or adopt new products to solve new consumption problems. For example, when a university student joins an open source software project, the Internet he usually uses is not only a tool for him to submit home work or to play games, but also an exciting and inspiring platform for him to develop, display and contribute his talent to the project. The Internet acts as a channel to develop, actualize, and express his individual and collective selves. He could be so strongly identified with the open source philosophy that he replaces Microsoft’s IE program with the Firefox program (an open source program) on
his computer to signify his identity as an open-source software programmer and consumer.

For Hirschman (1980), consumer creativity is a function of the density of a consumer's interconcept network and his/her mental repertoire of consumption situations. Interconcept network is a "network of interconcept linkages that consists of dimensions of one product to another according to the correlative pattern of their attributes" (Hirschman 1980, p. 287). Interconcept network density refers to the number of linkages existing among concepts based on the perceived intercorrelations of their respective attributes sets" (Hirschman 1980, p. 290). The mental repertoire of consumption situations is the mental scripts of episodic schema about various experienced consumption situations. With increasing and diverse consumption experiences, an individual can acquire more knowledge about more products and services in more consumption situations, and thereby extend the comprehensiveness of the interconcept network, increase the number of interconcept linkages, and increase and diversify his/her scripts about consumption situations. Facing a consumption problem, a consumer can retrieve a relevant script or combine portions of several scripts to mentally recreate the problem situation. After identifying the solution criteria, this consumer could search along accessible interconcept linkages for product concepts that might appropriately solve the consumption problem.

Whereas the studies adopting this view generate many insights about the psychological and social processes of perceived isolated individual consumers' creativity, they do not explore the cultural meanings of consumers' creative consumption practices.
For example, while Hirschman (1980) examines consumer creativity, she only focuses on how consumers creatively solve functional problems.

Contemporary consumer cultural studies demonstrate that consumers are also concerned with social and cultural problems in consumption activities (Gabriel and Lang 1995). Whether succeeding or failing in changing the world and their own lives, consumers desire and make efforts to make changes because “individual creativity . . . ultimately enhances a positive sense of self” (Kozinets et al., 2008). Of these consumer cultural studies, there are at least three different political-cultural views of consumer creativity: the liberatory postmodern view, the manipulation view, and the evolution view. All these three views see consumer creativity as a micro-emancipation process, which has rich political implications and cultural meanings.

Before we move to these three views, we first need to clarify the meanings of two terms: politics and political. According to the Oxford English Dictionary, the term “politics” may be defined as (1) the activities, practices or policies associated with governing or administrating an area, a community, or a state, (2) the ideas, beliefs, or commitments of a particular individual, organization, or community concerned with questions of authority, power, and status, and (3) the assumptions or principles relating to or underlying any activity, practice or theory of a particular individual, organization, community, or state concerned with questions of authority, power and status. The term “political” may be defined as related to or concerned with politics. In this thesis, the argument that consumer creativity has political implications means that consumer creativity is implicitly and/or explicitly related to issues of authority, power, and status.
2.2.3 The Political-Cultural View of Creativity of Isolated Individual Consumers

Consumer creativity does not exist in a vacuum. We live in a society where various values and norms regulate our everyday behaviors. It is impossible that a given community would welcome all the current criteria of creativity in every context and that the criteria embraced by the community now will never become outdated in the future. To promote creative products (e.g., creative ideas, solutions, consumption practices) to the relevant field and domain, immediate community or the wider society, or to express our selves symbolically through these creative products, we might have to engage in a kind of struggle against some existing criteria and their underlying values and ideologies that constrain our creative self-expressions as well as the social actors who consciously or unconsciously support these criteria (Berman 1972, 1988; Trilling 1972; Taylor 1989, 1992). So, consumer creativity might have rich political and cultural implications.

The political-cultural view of consumer creativity is exemplified by the liberatory postmodern view, the manipulation view, and the evolution view. All these three views assume that contemporary consumers are active producers of cultural meanings and resist social, cultural, political forces (e.g., the market logic, mass culture, dominant capitalist corporations, the value of private ownership) that they perceive to constrain creative freedom. But, the three views have different assumptions regarding this kind of ideological struggle.

2.2.3.1 The Liberatory Postmodern View of Consumer Creative Resistance

This view of consumer creativity (Firat and Venkatesh 1995) assumes that the consumer is a free, active cultural producer. To resist social and cultural forces that are
perceived as constraining, consumers not only creatively use and/or modify existing products or services in the marketplace but also create their own unique cultural meanings from their consumption practices, which are different from the meanings originally promoted by marketers (McCracken 1988). Through their localized, creative, and rebellious consumption practices, consumers accelerate the fragmentation of the marketplace. As a result, consumers are able to establish a “lifeworld” outside the market system” (Firat and Venkatesh 1995, p. 258), at least temporarily leaving any social, cultural, and political constraints connected with the market system behind. In this lifeworld, individuals can engage in creative consumption practices freely, and their creativity is only constrained by the limit of their imagination (Ewen 1988). It is argued that, in the postmodern era, contemporary consumers can create their individualized, emancipatory enclaves or lifeworlds within the context of the cold, constraining, inhumane marketplace, free from the impact of mass culture and the dominant corporations that try to encroach on these enclaves. For Firat and Venkatesh (1995, p. 258), “True emancipation of the consumer can materialize if s/he were able to move in these social spaces without the perennial panopticon of the market” through creative consumption practices. In these social spaces (e.g., swap meets, flea markets, swing dancing scenes), the consumer can engage in free self-development, self-actualization, and self-expression, although such freedom is limited in these social spaces.

For example, Renshaw (2006) finds that some swing dancers build, actualize, and express their unique identities by engaging in swing dancing, thrift store shopping, and tavern socializing. In the lifeworlds of swing dancing scenes, thrift stores, and taverns, these consumers perceive that they are able to resist the marketing tricks and teachings of
profit-driven corporations and the constraints for mainstream consumer identities. These consumers believe that these creative consumption practices help them to distance themselves from the market system, although outside these social spaces they still experience various constraints.

This liberatory postmodern view is optimistic about an individual’s creative resistance by implicitly assuming that the consumer is able to create and safeguard a lifeworld. But, this liberatory view might underestimate the power of companies that try to utilize the creative ideas and practices of these rebellious consumers and to creep into these localized, emancipatory lifeworlds. The other two views investigate the responses of companies more thoroughly.

2.2.3.2 The Manipulation View of Consumer Creative Resistance

Some researchers (Frank 1997; Holt 2002; Heather and Potter 2004) see individuals’ creative consumption practices against rampant consumer culture and the capitalist system as doomed because these practices will be appropriated or manipulated by commercial companies if such appropriation is profitable. For these researchers, consumers’ creative resistance ironically perpetuates consumer culture and the capitalist system. To optimize their consumption experiences and to challenge and/or to avoid the perceived oppressive consumer culture, some consumers creatively rework market offerings and/or selectively purchase perceived proper products. That is, the seemingly rebellious creative resistance and the resulting self that is perceived or claimed to be self-determined and independent from market influence are just realized through purchasing products on the marketplace. Furthermore, companies can easily co-opt and manipulate
these consumers’ rebellious creative ideas. So, consumer creativity merely helps companies to reproduce or co-create the power relationship between dominated consumers and dominating companies.

2.2.3.3 The Evolution View of Consumer Creative Resistance

Some other researchers (Thompson and Haytko 1997; Thompson 2004) conceptualize consumers’ creative resistance as a dialectical power struggle against perceived oppressive constraining social forces by individual consumers. The dialectic power struggle between the two sides drives the evolution of innovation in the marketplace (i.e., the two sides dynamically adapt to each other). Thompson and Haytko (1997) find that some college students creatively juxtapose and rework the dominant cultural meanings in their life spaces and in the fashion marketplace. On the one hand, by creating their unique, individualized fashion styles and making their own fashion discourses that challenge the dominant fashion norms and related cultural meanings held by their social groups or promoted by companies, consumers (i.e., these students) create their personal and social identities. On the other hand, by appropriating the emerging countervailing cultural meanings and fashion styles created by resisting consumers, the fashion industry and other cultural industries translate these meanings and styles into the systems of dominant cultural meanings and life styles. One result of this appropriation is that both the hegemonic or dominant discourse and macrosocietal structure adapt to the changed consumer practices. In response, consumers might create new challenging consumption practices to adapt to the newly changed marketplace. Thus, consumer creativity is a driving force of the evolution of the marketplace, rather than a doomed
rebelling force that can be appropriated by the commercial interests if such appropriation if profitable.

The preceding studies adopting the personality traits view, psycho-social view, and the political-cultural view focus on the creative activities of isolated individual consumers, leaving the impact of interactions among individuals within a consumer community on consumer creativity unexamined. However, particularly with the growth of online communication channels, consumers also engage in creative activities in the context of consumer communities, co-creating their common consumption objects (e.g., online wiki encyclopedia, windsurfing boards) (von Hippel 2005). Such contextualized consumer creativity might share some features with isolated consumer creativity such as creative cognitive processes, problem-solving abilities, and creative resistance against some perceived oppressive social forces. However, consumer creativity in the context of consumer community is a result of more complex social interactions within an often virtual consumer community and between this consumer community and the broader society that include other social actors such as companies and related regulatory agencies. Due to the central role of social interactions in consumer creativity, consumer creativity in the context of consumer communities might have different features that the reviewed studies on creativity of isolated individual consumers could not explain.

In the marketing and consumer research literatures, there are a growing number of studies that explore consumer creativity in the context of a consumer community, seeing consumers as closely connected individuals rather than isolated individuals in their daily creative consumption activities. Due to the wide spread nature of Internet services, more and more contemporary consumers establish and join various online communities to co-
create their common consumption objects and experiences. Thus, this Chapter now turns to review studies on the emerging online creative activities of consumers who are networked producers of value (Venkatesh 1999; Kozinets et al. 2008). One common theme of these studies is that the individuals collaborate with each other to co-create their common consumption objects and experiences and this community-based creating process is harmonious, enjoyable, playful, and fun.

Before we move to the studies on consumer creativity embedded in online consumer communities, we first need to briefly review the literatures on community, consumer community, and online consumer community.

2.2.4 Three Concepts Related to Community-based Consumer Creativity

2.2.4.1 The Concepts of Community and Consumer Community

Many contemporary studies on community can be traced back to Tönnies’s (1887) *Gemeinschaft und Gesellschaft*. Gemeinschaft (or community) and Gesellschaft (or society) are two different forms of social structures and the later evolves from the former. Community is characterized by collectivity, commonality (e.g., shared values, enjoyment, possessions, and enemies), collaboration, moral commitment, traditions, customs, emotional bonds, and connectedness with the natural world. Contemporary society, built on modernization, is characterized by individuality, commerce, contract, ruthless competition, calculated rationality, indifference to traditions, isolation from others, and disconnectedness with the natural world. For Tönnies (1887), the social life of the pre-modern community was natural and organic but
was replaced by the artificial and mechanical social life of the modern society, at least in his era. Despite his pessimistic critique on modernity, Tönnies does see the possibility of building a modern society that integrates the bright aspects of the traditional community (Aldous, Durkheim, and Tönnies 1972; Adair-Toteff 1995).

Contemporary consumer communities seem to realize this possibility. Despite the fact that there are at least ninety-four different definitions in the literature on community, most of them agree that there are three core components of community: consciousness of kind, shared rituals and traditions, and a sense of moral responsibility (Hillery 1955; Muñiz and O’Guinn 2001). Consciousness of kind (i.e., the intrinsic connection that community members feel toward one another and the collective sense of difference from others not in the community, or collective consciousness of belonging to a community, Muñiz and O’Guinn 2001, p. 413) serves to make members’ collective self or identity salient, satisfying their needs for belonging to a collectivity beyond members’ respective individual selves (Maslow 1968; Sedikides and Brewer 2001). Rituals and traditions display and perpetuate the meanings of the community’s collective self in the members’ everyday life and maintain the community’s shared history, culture, values, norms, and beliefs, the central elements of the community’s collective self. Rituals are conventions that make the cultural meanings of the collective self visible and experiential and thereby strengthen the cohesion and solidity of the community. Traditions are sets of collective practices that seek to celebrate and to inculcate certain behavioral norms and values.

A consumer community may be defined as a community where members share a common consciousness of kind, place special emphasis on some type of consumption as part of a celebration, ritual, or traditions, and have a sense of moral responsibility toward
the whole community and each other. This definition drops off the traditional conditions that all members must live in the same geographic area and are free from the influence of commerce, emphasizing the common values, norms, goals, and collective self. For example, members of the Apache community live around the world but share the same value of open source code and see themselves as Apache programmers and users who contribute to the commons of all community members and the general public. In addition, this community does not prevent companies from profiting from Apache software. Some companies even contribute their original proprietary codes to the Apache community. Negus and Pickering (2004) call these consumer communities “absent communities,” which means that the community members usually do not have contact with each other physically but are like-minded consumers of specific consumption objects. It is even argued that, for example, the further a group of consumers of specific genres of films are physically separate or absent from each other, the more powerful the sense of belong to a genre community these consumers have (Negus and Pickering 2004).

2.2.4.2 The Concept of Online Consumer Community

An online community is a group of people who interact through the Internet. Online communities are social aggregations that emerge from the Internet when enough people carry on public discussions long enough, with sufficient human feelings, to form webs of personal relationships in cyberspace” (Rheingold 1993, p. 5). Supported by information technology, an online community collectively creates its own collective identities, values, norms, traditions, and rituals, and has specific purposes (e.g., purposes related to health care, education, personal hobbies, specific social issues such as gender
equality and rampant consumerism). The emerging online or virtual communities indicate the modern “hunger for community that grows in the breasts of people around the world as more and more informal public spaces disappear from our real lives” (Rheingold 1993, p. 6).

The concept of online consumer community loosens Tönnies’s ([1887]1957) assumptions. A community is no longer restricted by geography due to the continuous advancement in transportation and communication technologies. Contemporary social life is “glocalized” (Wellman 2002, p. 92) because the Internet and other technologies expand people’s social contacts across geographic boundaries and bind them more closely to each other and any place than before. People have more channels to communicate with each other and keep connected with any geographic place. Also, online consumer communities are closely connected with commerce—they are established around certain products, brands, or consumption practices that are offered and/or supported by companies. Furthermore, some innovators of specific products are both active members of certain consumer communities and entrepreneurs simultaneously (i.e., user-manufacturers) (von Hippel 2002; Baldwin, Hienerth, and von Hippel 2006); and some companies actively engage in consumer communities by providing financial and technical support (Hagel and Armstrong 1997; von Hippel 2005; Gloor 2006; Tapscott and Williams 2006). Both companies and some consumers economically benefit from participating in online consumer communities. In this case, the boundary between consumers and companies and that between a community and commerce are blurred.

According to Preece, Maloney-Krichmar, and Abras (2003), online consumer communities vary depending on (1) whether they have physical as well as virtual
presence, central issues purpose, the software environment supporting them (e.g.,
listserver, bulletin board, chat forum, instant messaging, or different combinations of the
previous items), size, duration of their existence, stage in their life-cycle, and culture of
their members (e.g., international, national, and local influences that may be related to
politics, religion, gender, professional norms, etc.), and (2) governance structure (i.e., the
organization structure that maintains daily operation or social interactions of the online
community and associated norms and rules).

Online consumer communities are a modern version of community, which share
the three core components of community with the traditional communities as defined by
Tönnies ([1887]1957) and others (Hillery 1955). Online community members care about
and share with each other; they engage in collective creative activities (e.g., designing
sport shoes together), which requires artistic insights, passions, and strict reasoning
abilities. In these communities, consumers can experiment and play with diverse digital
selves with different cultural meanings with less concern about traditions and norms in
real life (Schau and Gilly 2003), exhibit and share their creative and even (some might
say) bizarre ideas, and learn from and support each other to collectively create their
common consumption objects, experiences and collective identities. The Internet serves
as a wild new frontier where consumers can interact with each other beyond spatial and
temporal limits; thus, such virtual interaction provides consumers with nearly unlimited
potential to co-expand their life space, co-experiment with new collective identities, and
co-create new knowledge and possibilities by sharing their diverse knowledge, skills, and
experiences and by continuously enhancing their collective knowledge pool.
So, we may tentatively argue that creativity might be the fourth core characteristics of online consumer communities. It is an online consumer community’s dynamic creativity that helps the community to (re)formulate and/or (re)create its shared values, beliefs, identity, traditions, norms, and rituals, which might reinforce the community’s consciousness of kind and moral obligations. Their community-based creativity helps consumers to express their selves through creative collaboration and to establish a re-enchanted world where passionate imagination and strict reasoning coexist in the claimed-to-be cold, rational, iron cage-like modern society (Kale 2004).

With this background knowledge in mind, we now move to several different views of consumer creativity in the context of online consumer communities.

2.2.5 The Sociocultural View of Community-based Consumer Creativity

This view assumes that consumer creativity is a sociocultural process rather than merely a social and psychological problem-solving process (Piller, Schubert, Koch, and Mösleom 2005). In the creative process, consumers collaborate with each other to develop creative solutions to their common consumption problems, create their common consumption objects and experiences and build their collective identity. Influenced by the sociocultural view in the psychology literature (Csikszentmihaly 1988; Amabile 1998), the studies taking this view examine the social, cultural, and psychological processes and mechanisms underlying the creative activities of consumer communities (Lee and Cole 2003; Hemetsberger 2002).
2.2.5.1 A Model of Developmental Progression of Individual to Collective Creativity

Kozinets et al. (2008) propose a model that describes the social and psychological process of how individuals become gradually engaged in collective creative activities of online consumer communities. According to this model, with increasing experience with the community and its web site, individuals start from contributing lower value content to contributing higher value content. In this process, members learn by doing and consume while producing. “The involvement process is based upon feedback and self-identification, a combination of affective ideological, social motivation, and educational intellectual commitments” (Kozinets et al., 2008, p. 343). With increasing interaction with other members directly (e.g., seeking and giving help, commenting on others’ postings, reflecting on others’ feedback, reviewing and assessing others’ ideas) and/or indirectly (only reading the postings or contents created by others), all participants gain a sense of membership in the community (i.e., a sense of collective identity) and sharpen their skills (i.e., develop their individual capacities, a key component of one’s sense of individual self). Through such interaction, the participants build upon each one’s contributions and co-create their common consumption products and experiences whose value is bigger than the sum of the participants’ individual contributions. Together, they create the whole content of the community’s web site, the creative solutions to common consumption problems, all the norms, traditions, rituals, and jargons of the community, and the shared consumption experiences. During this process, the community may also develop hierarchies of expertise (Kozinets 2001; Füller, Jawecki, and Muhlbacher 2006).
2.2.5.2 A Framework of Collective Problem-Solving Process

While the model of Kozinets et al. (2008) focuses on how individuals gradually progress into the collective creative activities, the framework of Jawecki, Füeller, and Verona (2008) focuses on the process of collective creative problem-solving. In an online consumer community, individuals become aware of existing problems and needs by exchanging consumption experiences and related opinions and comments and reporting innovative product uses. After finding a potential, no matter how primitive, idea, concept, or solution, a member will present it to the community. Then, through ongoing dialogue full of questions and answers, applause and challenge, members will continuously and collectively reflect on and rethink the initial idea, concept, or solution, generating newer and more appropriate ideas about or solutions to previously unsolved problems and needs. Stimulated by and building on emerging ideas or solutions, the community continues to perfect them. Finally, the new creative products emerge that are better than those that might be innovated by any single member and certainly better than the sum of the outputs of all individual members.

While Kozinets et al. (2008) and Jawecki et al. (2008) give us a macro view of consumer creativity in the context of a consumer community, we still need more details about the mechanisms underlying such contextualized consumer creativity.

2.2.5.3 A Social-Experiential View of Learning and Knowledge-Building

Hemetsberger and Reinhardt (2006) propose a social-experiential view of learning and knowledge-building in open-source communities to explain some mechanisms that online consumer communities use in their collective creative activities. According to this
view, tacit knowledge cannot be transferred, translated, or captured but only be displayed and manifested in our activities. To learn others’ tacit knowledge, we need to reexperience the process in which the originators arrived at the knowledge. So, collaboration platforms should provide tools and spaces where members can display their activities and stimulate others’ discourses. In the context of the FOSS community, such tools and spaces include code (i.e., the source code of software), transactive group memory (i.e., repository of previous versions of software and archives of postings that sequentially record communications among members regarding specific codes and other issues, both of which can be retrieved independently from the originators of the ideas), instructive content (i.e., community documents or tutorials that suggest reflective observation and active experimentation, such as descriptions, screenshots, cases, and code examples), and discourses (i.e., socio-emotional conversations and technology-related talks). These tools and spaces enable community members to re-view the situations which they are in and re-experience their collective practices; thus, community members can collectively reflect on their previous activities and conceptualize multiple alterative solutions, and virtually co-experiment with these alternatives. It is through continuous symbolic social interactions based on these tools and spaces that the community collectively learns and builds new knowledge. The arguments of Hemetsberger and Reinhardt (2006) are supported by the study of Lanzara and Morner (2003), which finds that some technology-based tools such as source codes and mailing lists serve as dynamic vehicles that make knowledge creation, accumulation, and dissemination possible.
However, at this point, one may ask, why do so many people freely reveal their innovative ideas to fellow members and the general public even though such ideas might produce economic benefits to others with no apparent financial benefit for the revealers? What are the motivations of these free revealers?

2.2.6 The Psycho-Social View of Motivations

Many researchers adopt the psycho-social view to explain the seemingly paradoxical phenomenon of consumer creativity (Fershtman and Gandal 2007). The most popular view of motivations to contribute to collective creative activities is based on a theory distinguishing intrinsic and extrinsic motivations (Deci and Ryan 1985; Ryan and Deci 2000). Intrinsic motivation refers to pursuing something because it is interesting and fun (for its own sake) and extrinsic motivation refers to the instrumental value (e.g., reward) of taking an activity. One implicit assumption of this view is that consumers have multiple, contradictory motivations. A basic argument of this view is that a combination of both intrinsic and extrinsic motivations drive individuals to engage in collective creative activities (Hars and Ou 2002; Bonaccorsi and Rossi 2006; Gloor 2006; Krishnamurthy 2006; Mikkonen, Vadén, and Vainio 2007).

The intrinsic motivations examined in the literature include enjoyment, self-expression, altruism, generalized reciprocity, and gift-giving attitude (Rossi 2004). Shah (2005) and Frank and Shah (2003) find that many innovators in the sports equipment consumer communities enjoy working with others to develop their hobby products. Osterloh, Rota, and Kuster (2007) find that FOSS community members perceive writing or debugging programs as a flow experience (Csikszentmihalyi 1975). Altruism, or the
willingness to contribute to the welfare of other people, is another motivation (Osterloh, Rota, and Kuster 2007; Rossi 2004). Community-based intrinsic motivations include the moral obligation to fellow community members and to the community as a whole (e.g., holding to the community norms such as fairness and giving assistance freely) (Frank and Shah 2003; Edwards 2001), and the sense of collective identity (Hertel, Niedner, and Hermann 2003; Ghosh 2005; Lakhani and Wolf 2005; Bagozzi and Dholakia 2006). Community-based intrinsic motivations are related to generalized reciprocity and a gift culture. Generalized reciprocity is a communal expectation that one's assistance to fellow members will be reciprocated by the community as a whole (Molm, Collett, and Schaefer 2007; Lawler, Thye, and Yoon 2008). In online consumer communities, one's assistance to fellow members is perceived as contribution to the community as well as anonymous help to the receiver(s) of the help (Sohn and Leckenby 2007). The culture of consumer communities holding the principle of generalized reciprocity is usually described as a gift culture (Bitzer, Schrettl, and Schröder 2007). Raymond (1999) argues that in the FOSS culture, social status is determined by what a member gives away to the community rather than by the resources he or she controls (e.g., economic resources). Reputation for generosity is accumulated as symbolic capital by continuously contributing creative ideas and solutions to the community.

The extrinsic motivations examined in the literature include peer recognition, economic benefits, user needs, and learning and performance improvement (Rossi 2004). Impressive contributions to the community can enhance peer recognition or one's reputation (Franke and Shah 2003). In the FOSS community, contributing code to the community can bring multiple economic benefits to the contributors. One's reputation for
innovative contributions can attract future employers’ attention and thereby lead to better
job offers, shares in the open source software-based companies, or future access to the
venture capital market (Lerner and Tirole 2005). Satisfying consumers’ own needs is
recognized as another extrinsic motivation (von Hippel 2002; Lerner and Tirole 2005;
Lakhani and Wolf 2003; Hertel et al. 2003). Many consumers engage in community-
based creative activities to solve their own consumption problems. In addition, freely
revealing one’s innovative ideas or solutions to fellow members and even to companies
could (1) lead to a network effect—expansion of the user base that increases the values of
one’s ideas or solutions and (2) attract other people to improve the original ideas or
solutions (von Krogh 1998, 2002). The final extrinsic motivation examined is learning
and improving one’s performance. Members can learn new skills and improve their own
performance through the on-going activities of help-seeking, help-giving, commenting on
others’ ideas, and being commented. Even finishing the mundane supporting tasks of
providing documentation and posting questions and answers help the support providers to
learn new knowledge (Lakhani and von Hippel 2003). For Hooker, Nakamura, and
Csikszentmihalyi (2003), a creative community with its collective learning and
knowledge building tools and spaces is like a mentor for its members. This communal
mentor system is a combination of vertical mentoring (i.e., a one-way mentoring between
an authoritative mentor and a learning disciple) and horizontal mentoring (i.e., mutual
mentoring among community members) (Keinänen and Gardner 2004).

The specific combination of intrinsic and extrinsic motivations is emergent and
dynamic for a consumer engaging in community-based creative activities. Assuming that
a person has multiple, dynamic selves and related multiple, dynamic, emerging
motivations (e.g., many consumers change their digital selves with dynamic motivations, Schau and Gilly 2003), Freeman (2007) argues that FOSS community members‘ voluntary contribution to the creative products of the community is driven by multiple, dynamic, changing motivations during their different stages of personal life and the related life projects. For Freeman (2007, p. 60), “to understand the individual volunteer and his/her motivation to participate, it is imperative to focus on the volunteer's different simultaneous, competing, contradictory and changing personal projects with their respective motives, and their relation to the collective object of that activity.” For example, a programmer might originally participate in a FOSS project because he enjoys such activity and has spare time after class. After working for a software firm, he might continue to work on a FOSS project but because this was part of his job (his firm could sponsor this project).

This view explores the social and psychological factors that motivate consumer creativity in the online consumer communities but do not give sufficient attention to the cultural meanings of this community-based creativity to consumers, which are explored by studies adopting the sociocultural view.

2.2.7 The Sociocultural View of Motivations

The studies adopting this view assume that consumer creativity embedded in a consumer community is a sociocultural process in which consumers collaboratively create their common consumption objects and related cultural meanings. These studies explore the cultural meanings behind various motivations. Based on a netnography of several online basketball communities, Füller et al. (2006) find that the creative activities
of consumer communities are mainly driven by excitement rather than pure need for product improvement in functions. Some members experience their communities as a nationwide family; they see some of the knowledgeable members as “god-like” persons who unselfishly share their ideas with or enlighten the less-experienced members. Müniz and Schau (2005) suggest that engaging in creative activities of a community satisfy contemporary consumers’ deep needs for religious affiliation. According to Hemetsberger (2005), online co-creating activities help consumers to build their spiritual selves as well as collective self beyond individuality. Collaborating with fellow community members to create new ideas and/or solutions to common consumption problems is a way for consumers to develop, realize, and express their individual and collective selves (e.g., the think self, the emotional self, the collective self, the spiritual self) (Hemetsberger 2005). They create their selves by creating things.

The sociocultural view of motivations extends our understanding of motivations of consumers engaging in community-based creative activities by exploring the cultural meanings of these activities. However, all these reviewed studies on community-based consumer creativity, whether they take the sociocultural view or the psycho-social view, focus on the assumed harmonious dynamics between individuals and between individuals and the collective. All the reviewed studies on community-based as well as isolated consumer creativity do not explore how consumer creativity is impacted by the dynamics of a consumer community wrought with paradoxes, conflicts, ideological struggles, and related power relationships. A summary of these studies is provided as follows.
2.2.8 Summary of the Marketing Literature

In the marketing literature, consumer creativity has been conceptualized as (1) a capacity of and a process of producing something innovative and appropriate and (2) a process to build, actualize, and express one’s self through innovative, fresh, and often rebellious consumption practices. There are two streams of studies in the current literatures on consumer creativity. The first stream sees consumer creativity as an insolated, individual process. There are at least three views of such isolated consumer creativity: the personality trait view, the psycho-social view, the political-cultural view (exemplified by the liberatory postmodern view, the manipulation view, and the evolution view of consumer creative resistance). These studies contribute to the emerging value co-creation literature by investigating how isolated individuals engage in creative consumption activities. However, contemporary consumers are increasingly engaged with various consumer communities. So, it is necessary to study consumer creativity by putting it in the context of consumer communities.

The second stream sees consumer creativity as a contextualized process in which individuals of a consumer community harmoniously collaborate with each other to co-create their common consumption objects and experiences; but, these studies focus on the harmonious interactions between individuals and between individuals and the collective. There are two different views of such community-based consumer creativity. The studies adopting the sociocultural view have examined the process of how individual consumers develop their knowledge and skills and develop, actualize, and express their individual and collective selves by integrating their own creative ideas into collective creative products, the problem-solving processes, the mechanisms or tools consumers use during
their co-creating activities, the motivations to share creative ideas, and the cultural meanings that consumers create and experience during such activities. The studies adopting the psycho-social view find that dynamic, changing combinations of intrinsic and extrinsic motivations drive consumers to engage in their co-creating activities.

The extant studies on the community-based consumer creativity implicitly assume consumer creativity as a social, cultural, and psychological process embedded in a harmonious consumer community (i.e., a communal process of caring, sharing, collaboration, and enjoyment). However, a consumer community might not be so pastoral and consumer creativity could also be a political process. Individual members could both cooperate and contest with each other, affecting the distribution of authority, power, and status in a consumer community and the society. First, conflicts within a consumer community could exist and such conflicts could have rich political implications. Organization theories find that group members both cooperate and compete with each other (Levi 2001), that “conflict-free groups do not exist” (Van de Vliert and Janssen 2001, p. 267), and that creativity within organizations is a political process because new ideas often challenge the existing distribution of authority, power, and status among individuals and groups in organizations (Styhre and Sundgren 2005). A consumer community can be seen as a big group. So, some types of tension among individual members and subgroups within a consumer community could exist. For example, there is an ongoing online debate between the pro-Lucas and anti-Lucas subgroups within the Star Wars fan community (Brooker 2002) (but the political implications of this tension are not explored in this book). So, we can reasonably expect that there might be similar tensions or conflicts within a creative consumer community and such tensions might
affect the existing distribution of authority, power, and status within the consumer community as well as the society of which the consumer community is a member.

Second, there could be conflicts between some consumer communities and companies. The current theoretical and empirical studies on consumer creativity as well as value co-creation in the context of consumer communities implicitly assume that companies can always utilize and welcome the fruits of consumer creativity without meeting any resistance from consumer communities—the consumers only enjoy the creative processes financially and/or technologically supported by the companies. A few studies (Arvidsson 2005; Zwick, Bonsu, and Darmody 2008) do examine the conflict between consumer communities and companies. But these studies, like the manipulation view of isolated consumer creativity (Holt 2002), implicitly assume that the creative fruits of consumer communities will be certainly co-opted by companies and that all consumer communities are not aware of the manipulation by companies and only enjoy what they believe to be as harmonious collaboration between consumer communities and companies. Thus, for Arvidsson (2005) and Zwick et al. (2008), the logic of co-creation is merely an attractive deceiving/governing tool for companies to exploit consumer creativity in harmonious collaboration with happily duped consumers. But, in the co-creation process, there might be ideological conflicts between consumer communities and companies. Consumers also might not be willing to give up control of their creative products in any context; they even might not welcome any support from companies to avoid being controlled or inappropriately influenced. Furthermore, not all companies welcome all the creative products of all consumer communities at all times. At least some companies’ profits might be threatened by consumer creativity due to the free, publicly
accessible nature of the creative products of consumer communities. The freely accessible creative products of consumer communities could compete with the commercial offerings in the marketplace and thereby influence the power relationship between consumer communities and companies and that among competing companies, as the case of free-open source software demonstrates.

To better understand consumer creativity as well as value co-creation (Vargo and Lusch 2004), we need to understand subtler details of how individual consumers interact with each other in more dynamic communities. The new marketing logic of value co-creation in the context of consumer communities may be more than harmonious collaboration. Value co-creation may be multi-dimensional and full of paradoxes and conflicts at the individual, community, and society levels. Exploring these paradoxes and conflicts, their political implications, their impacts on self-building, self-actualization, and self-expression by consumers, and consumers’ own understanding of these paradoxes and conflicts would give us new insights about consumer creativity, value co-creation, and consumer community. Berman (1972, 1988) conceptualizes creativity as a community-based process, which is rich in paradoxes and conflicts at the individual, community, and society levels. We might be able to further contextualize consumer creativity by drawing on his political-cultural view of creativity to explore how individuals engage in creative activities in a consumer community wrought with multiple paradoxes, conflicts, and ideologies.
Chapter 3

The Political-Cultural Perspective

In Chapter Two, we reviewed the psychology literature on creativity and the marketing literature on consumer creativity. In the psychology literature, creativity is conceptualized as a capacity to produce something new and appropriate and a process of self-development, self-actualization, and self-expression. The studies adopting the creative personality traits view examine a set of creative personality traits (e.g., divergent thinking, open to opposite views). The studies adopting the cognitive view examine various cognitive processes (e.g., preparation, incubation, illumination, verification) involved in individual creativity. The studies adopting the biopsychosocial view find that multiple biological, psychological and social factors (e.g., family, education, resource constraints) affect one’s creativity. While the studies adopting these three views focus on isolated, individual creative process, the studies adopting the group/collective view argue that, in many cases, creativity is performed by a group or community and the fruits of group-based creative activities can be more creative than those of isolated, individual creative activities. Group processes (e.g., social judgment, Csikszentmihaly 1999), norms and traditions, and the sense of collective self affect creative activities of groups. One limitation of the reviewed psychology studies is that they do not explore how individuals create and understand the cultural meanings of their creative activities and their interactions with the other social forces such as companies.

The psychology literature on creativity influences the marketing literature on consumer creativity. Consumer creativity is also conceptualized as a capacity of creating
something new and appropriate and a process of developing, actualizing, and expressing one’s self. Among the studies on isolated individual consumers’ creative activities, some studies focus on creative personality traits (e.g., creative cognitive styles, exemplified by the creative personality traits view), cognitive and social processes (exemplified by the psycho-social view), or individuals’ creative resistance against mainstream ideologies in society (exemplified by the liberatory postmodern view, the manipulation view, and the evolution view), without exploring consumer creativity in a context of a consumer community wrought with paradoxes and conflicts.

Among the studies on consumer creativity in the context of a consumer community, the studies adopting the sociocultural view investigate the social processes, mechanisms, and motivations involved in community-based creative activities and related cultural meanings. The studies adopting the psycho-social view examine multiple intrinsic and extrinsic motivations of individuals who voluntarily share their ideas with fellow community members. However, with a few exceptions, the previous studies that contextualize consumer creativity in consumer communities assume that individual consumers harmoniously collaborate with each other and the consumer communities harmoniously collaborate with companies, without exploring the effects of a consumer community full of paradoxes and conflicts on consumer creativity. So, putting consumer creativity into a more dynamic community context full of paradoxes and conflicts might enrich our understanding of consumer creativity and value co-creation.

My integrative analysis of the reviewed psychology literature and marketing literature arrives at four characteristics of creativity that I will use as my conceptual lens: self-expressiveness (i.e., an individual engages in creative activities to develop, actualize,
and express his/her dynamic, multiple selves or identities), social judgment (i.e., an activity and its outcome needs to be judged as creative or not by relevant authoritative members within a community or a society), process (i.e., creativity is an ongoing, dynamic process in which an idea is generated, expressed, and socially judged), and novelty (i.e., an idea should be judged by community members as new, fresh, and original). Thus, I now define consumer creativity as a process of self-expression that consumers engage in to individually and/or collectively generate something that is socially judged as innovative or novel.

To capture these four characteristics and paradoxes/conflicts involved in the creative process, I will use Berman’s (1972, 1988) view of creativity as my theoretical lens. For Berman, creativity is a community-based, political-cultural process in which individuals engage in innovative practices in their daily interactions with fellow community members to achieve their ultimate life goals (e.g., building or constructing their ideal identities and creating a modern world in which they feel "at home," Berman 1988, p. 5). Contrasting with the traditional view of consumer creativity in consumer communities as an enjoyable, harmonious, collaborative process, the process of consumer creativity in Berman’s view is rich in paradoxes, conflicts, ideological struggles, and political implications concerning the distribution of authority, power, and status in a consumer community and a society.

In Chapter Three, drawing on Berman’s (1972, 1988) view of creativity as my theoretical lens and informed by the insights of other researchers (Seitz 2003; Trilling 1972; Taylor 1989, 1992; Csikszentmihalyi 1988), I aim to further contextualize consumer creativity in a consumer community full of paradoxes and conflicts and to
develop a new political-cultural framework of consumer creativity. This exploration can enrich our understanding of how contemporary consumers creatively build their identity and express their sense of self, how those potential paradoxes and conflicts impact their creative activities, how their quest for creativity impacts power relationships within a consumer community and between this community and companies in the marketplace, and how a consumer community and companies co-create value for both parties.

3.1 A Brief Review of Berman’s View of Creativity

A fundamental assumption of Berman’s political-cultural view of creativity is that individuals and their creative activities are embedded in communities and in historical environments in which political, social, and cultural forces and institutions are inextricably intertwined with each other (Berman 1972, 1988; Trilling 1972; Taylor 1989, 1992). Creating something new always means challenging established ideas, rules, criteria, and traditions of a community, posing a challenge to those people who adhere to these ideas, rules, criteria, and traditions. Furthermore, all ideas, rules, criteria, and traditions of a community or a society are subjected to challenges and contests. Accordingly, Berman (1972, 1988) conceptualizes creativity as an ongoing, community-based process in which individuals build their identities and express their sense of self by generating something new and appropriate. In so doing, interests and ideologies are inevitably confronted, raising political and cultural implications.

For Berman (1972, 1988), there are three levels of paradoxes and conflicts in the process of consumer creativity: the individual level, the community level, and the society level. At the individual level, there exist intrapersonal paradoxes and conflicts in the
minds of individual community members. At the *community level*, there exist competition among individual community members for the legitimacy of their own respective creative ideas, ideological conflicts between subgroups, and conflicts between individual members and the community as a whole and its existing criteria of creativity. At the *society* level, there exist ideological conflicts and competition between a creative consumer community, and dominant companies and current copyright laws that support these companies. The political-cultural view of consumer creativity which is built on Berman's view of creativity is illustrated in Figure 3-1.
3.2 Intrapersonal Paradoxes and Conflicts at the Individual Level

For Berman (1972, 1988), creativity involves intrapersonal paradoxes and conflicts. Because modern individuals have multiple, dynamic, and even contradictory
identities and because creating something is a way to develop, actualize, and express one’s sense of self, consumers might engage in different creative activities that are related to contradictory identities in different contexts and/or a creative activity that is driven by multiple and contradictory values, norms, and goals. In addition, these different creative activities and values, norms, and goals could have contradictory political implications and cultural meanings (Taylor 1989). Creativity may be a way in which the modern consumer maneuvers through these intrapersonal paradoxes and conflicts.

3.2.1 The Modern Self

According to Berman (1972, 1988), the modern consumer’s self is dynamic, fluid, expansive, communal, and characterized by multiplicity and intrapersonal conflicts. This is because the self is embedded in and interacts with its specific changing political, social, and cultural environments that are inextricably intertwined with each other. Due to this historical embeddedness and interaction with its changing environments, the self and thereby the efforts of developing, actualizing, and expressing one’s self are characterized by dynamics, multiplicity, and intrapersonal paradoxes and conflicts and are full of political implications.

The modern consumer gets his or her sense of self and builds his or her identity through his or her dynamic daily (in)direct interactions with multiple others. From these interactions, the consumer learns and internalizes multiple values, norms, and goals that consist of the consumer’s multiple selves or identities. These multiple values, norms, and goals and thereby multiple identities could conflict with each other but not refute each other. The consumer might seek a sense of unity in his or her multiple identities but never
achieve it (Taylor 1989) because of the diversity and dynamics of his or her social interactions in dynamic political, social, and cultural environments. As a result, the consumer’s sense of self is characterized by fluidity, multiplicity, and intrapersonal conflicts. In his or her daily life, these multiple selves or identities represented by multiple and conflicting values, norms, traditions, and goals intertwine with each other to shape his or her specific activities, although he or she might not be aware of such intrapersonal negotiation.

3.2.2 Consumer Creativity and Intrapersonal Paradoxes/Conflicts

A consumer might experience intrapersonal paradoxes or conflicts when engaging in competing creative activities and in the same creative activities. Creative activities are a channel for consumers to develop, actualize, and express their multiple selves. Individual consumers could contribute to the different creative activities of multiple groups or communities simultaneously; these creative activities might symbolize competing and conflicting values (e.g., collectivism and individualism), norms (e.g., egalitarianism and elitism), or goals (e.g., spiritual and material achievements) behind these different selves. In this case, consumers will experience intrapersonal paradoxes, conflicts between these different creative activities and related values, norms, or goals. For example, a FOSS programmer often works for a proprietary software company as an employee. In his or her paid working time, he or she develops proprietary software that follows the value of private interests in that such software forbids copy, modification, and redistribution without the company’s permission. In his or her spare time, and even in the work time in some cases, the programmer works on a FOSS project, which promotes the
value of public interests (the FOSS community argues that software is a public good and every user of any software has the right to get access to, copy, modify, and redistribute the source code of the software as he or she likes). It is also possible that the FOSS that he or she develops directly competes with the proprietary software which he or she develops for his or her employer or other software owned by this company in the marketplace. The programmer is usually aware of the conflicting values of and the competition between his or her two different types of creative activities.

Furthermore, when a consumer contributes to one creative project of a consumer community, the identity symbolized by this activity could also consist of some conflicting values, norms, or goals, which could have conflicting impacts on the consumer's experience within this community. So, this consumer will also experience some intrapersonal paradoxes or conflicts. For example, to different degrees in different contexts, a consumer community usually encourages its members to develop their unique creative skills and ideas and to contribute these skills and ideas to the community—that is, both individualism and collectivism are encouraged. A consumer might simultaneously internalize these two conflicting values, each of which could have conflicting impacts on his or her creative activities. As for individualism, on one hand, it could motivate him or her to make extreme efforts to develop highly creative ideas and to freely reveal these ideas to fellow community members because he or she desires to display his or her creative capacity and to become an authoritative member. On the other hand, individualism could motivate a consumer to refuse to do some routine, less creative but critical work for the community (e.g., answering simple questions of or transferring basic knowledge to newbies so that they can quickly become competent enough to contribute
their own creative ideas to the community). Although he or she might dedicate time to more creative work that more easily leads to a higher reputation and status in the community (Kozinets 2002a), the community's long term interests are damaged because creativity of the community as a whole is enhanced by nurturing a galaxy of highly creative and collaborative people rather than a few isolated bright stars (Gloor and Cooper 2007). As for collectivism, it can motivate a consumer to freely contribute his or her creative ideas to the community, enhancing creativity of the community as a whole. But, collectivism can also make him or her hesitate to challenge the community’s prevailing but mediocre creative ideas; thus, the potential of the community’s creativity might not be fully realized, and the prevailing hierarchy of authority, power, and status based on these criteria is maintained.

The political implications of such intrapersonal paradoxes/conflicts are closely related to the paradoxes/conflicts at the community and society levels, which are discussed in the following sections.

3.3 The Conflicts at the Community Level

3.3.1 Competition among Individual Members

Every community member wants to contribute his or her ideas to the community but not all ideas contributed by members can be accepted or legitimized by the community (Csikszentmihalyi 1988). All ideas contributed by members are judged against the community’s prevailing criteria of creativity. Only the most creative ideas are accepted and integrated into the pool of creative ideas of the community, or have the
rights to enter into the common consumption domain of the community (Csikszentmihalyi 1988). For a dedicated member, his or her sense of self related to a specific consumer community will be enhanced if his or her ideas are integrated into the community’s creative products. So, in addition to some community-organized creativity contests (Kozinets 2002b, Füller et al. 2006), there is an undeclared competition among dedicated members who try their best to develop and promote their ideas to the community. One member’s reputation of knowledge and creativity is built on how many ideas contributed by this member are accepted by the community (Raymond 2000a, 2000b). And higher reputation helps one member to gain more authority and power and higher status to judge the creativity of ideas contributed by all community members (Schouten and McAlexander 1995).

3.3.2 The Conflict between Individual Members and Their Community

Individual members often confront their community in their creative activities (Berman 1972). This is because “creative activity is shaped by recognition or its absence, often by the misrecognition of others, and so a person or group of people can suffer real damage, real distortion, if the people or society around them mirror back to them a confining or demeaning or contemptible pictures of themselves” (Taylor 1994, p. 25; cited in Seitz 2003, p. 390). A member’s ideas could be rejected as inappropriate by the authoritative members. Due to their reputation of specific knowledge and creativity, the authoritative members have the power to grant legitimacy or appropriateness to ideas contributed by all members. If these ideas do not satisfy the requirements of the prevailing criteria of creativity that are guided by relevant values, norms, and traditions,
the authoritative members would reject these ideas as illegitimate or uncreative. As a result, a consumer’s ideas would not be integrated into the community’s creative products or not allowed to enter into the community’s common consumption domain (Csikszentmihalyi 1988).

However, if this consumer truly believes that his or her ideas are creative and will benefit the community, he or she might perceive these ideas as a necessary part of the community’s creative products and thereby a part of his or her ideal community identity. If these ideas are rejected, this consumer would feel that his or her freedom to build his or her identity is blocked. He or she might choose to modify his or her ideas, to keep silent, to leave the community for another community that could accommodate these ideas, to establish a new community to actualize these ideas if possible, or to challenge the established criteria and the authoritative members within the current community.

If this consumer chooses the last option because he or she is so dedicated to these ideas, the community identity symbolized by these ideas, and the current community, he or she would engage in a symbolic debate with the authoritative members and other members who embrace these prevailing criteria of creativity of the community. This debate is essentially a power struggle between the challenging consumer and the established authoritative members who symbolize the community as a whole. If the consumer loses the debate, the power structure of the community would be maintained: the current authoritative members, as gatekeepers of the common consumption domain, still have the power to (de)legitimate the ideas contributed by all members, to direct collective resources to further develop and actualize the legitimized creative ideas, and to integrate the legitimized ideas into the community’s creative products (e.g., the
community’s value system, traditions, norms, common consumption practices and solutions).

If this consumer wins the debate, the current criteria of creativity and related values, norms, and traditions might not be removed or modified at once. Whereas his or her social status and reputation within this community would be improved (Raymond 2000a, 2000b), the ideal identity perceived by this consumer, which is symbolized by the consumer’s creative ideas, is still at least partially blocked. There still exists a conflict between this consumer, and the community’s current criteria of creativity and the authoritative members who hold to these criteria. If, at least some of the current dominant criteria of creativity and related communal values, norms, and traditions are changed, the power relationship between this consumer and the current dominant authoritative members will be changed—this consumer would become a new authoritative member and some current authoritative members would step down.

Furthermore, this consumer might present multiple, diverse ideas, which symbolize his or her diverse ideal identities; but not all of these ideas could be legitimatized and integrated into the collective creative products. So, this consumer might be able to actualize one or some of his or her ideal identities with others being blocked. If this consumer is dedicated to the community and the identities symbolized by all his or her ideas, he or she will still engage in a power struggle against the established criteria of creativity and the authoritative members who embrace and embody these criteria.

This power struggle is never ending. At any point of time, there are always some members who disagree with some of the prevailing criteria of creativity of a consumer community (Nederman 1994; Yack 1985). And, at least some of the criteria with which
these individuals currently agree will unavoidably become outdated or improper, because these individuals’ own criteria of creativity are changing due to their ongoing, dynamic interactions with their fellow community members and other social actors outside the community (Berman 1972, 1988; Trilling 1972; Taylor 1992). So, some creative ideas of individual members might be in tension with some of the prevailing criteria of creativity and the related values, traditions, and norms of the community. This suggests that contemporary consumers might be always constrained by some criteria of creativity and some values, traditions, and norms of a community (Arnold and Price 2000; Kozinets 2002b; Kates 2002). Thus, some consumers have to, intentionally and/or unintentionally, struggle against these constraining criteria of their community in order to achieve their dynamic, perceived true selves or identities (Berman 1972, 1988; Trilling 1972; Taylor 1992). This dynamic struggle drives the ongoing changes in the established criteria of creativity and in the power structure of a consumer community.

Consumer communities are not isolated entities. According to Berman (1972, 1988) as well as Taylor (1989, 1992) and Seitz (2003), consumers and their communities are embedded in and interact with their environments where various social forces and institutions (e.g., dominant companies, legal systems, and ideologies) play active roles in the interaction between creative consumer communities and their environments. Next, I will discuss the potential conflicts between a creative consumer community and companies, the two parties who are assumed in many studies to co-create values harmoniously.
3.4 Paradoxes/Conflicts at the Society Level

For Berman (1972, 1988), a consumer community is embedded in a society that consists of multiple social actors that adhere to diverse ideologies and therefore competing criteria of creativity. To develop, actualize, and express its creativity, a consumer community would have to challenge some of the dominant criteria of creativity and their underlying values, norms, and traditions in the society. In contemporary capitalist societies, the prevailing criteria of creativity and related values, norms, and traditions are dominated by big companies (who benefits from these criteria of creativity) and embodied by current copyright and patent laws (Lessig 2002). So, there might be conflicts between a creative consumer community and some dominant, profit-driven companies.

In a society, or a bigger community, where diverse criteria of creativity exist and numerous creative ideas compete for public attention, creativity only emerges within a larger social matrix, in which ideas are commodities and their value in the intellectual marketplace is both galvanized and suppressed by extant politico-social organizations and institutions” (Seitz 2003, p. 387). A consumer community's creative ideas are commodities in the marketplace, too, which could be (de)legitimized by the extant dominant criteria of creativity and relevant politico-social institutions (e.g., copyright and patent laws) that are dominated by big companies.

When a consumer community’s creative ideas and related consumption practices emerge, if these ideas and practices provide business opportunities and contain no deviant components that challenge the dominant political, social, and cultural values, companies might co-opt these ideas and practices quite smoothly. This is possibly the ideal scenario
of value co-creation advocated by many researchers (Prahalad and Ramaswamy 2000; Gloor and Cooper 2007). This is demonstrated in the case of the online basketball communities studied by Füller et al. (2007). If these creative ideas and practices contain some components that the dominant political, social, and cultural values cannot accept, companies need to purify or remove those inappropriate ideas and/or practices before commodifying these creative ideas and practices. This is a popular scenario of value co-creation, which is illustrated in the case of outlaw Harley bikers (Frank 1997). The Harley-Davidson company makes huge money by marketing the purified cultural meanings of the biking experiences created by the biker community.

However, not all creative ideas of all consumer communities could be easily co-opted by companies. If a consumer community’s creative ideas and practices substantively threaten the market share of the commercial offerings and even the legitimacy of the current business philosophies of dominant companies, this community will be —subject to authoritarianism, patriarchalism, and social conformity when elite groups—particular large businesses and corporations enforce their own market prerogative” (Seitz 2003, p. 389). A power struggle starts. The negatively affected companies could try all possible methods to delegitimatize this consumer community’s creative ideas and practices so as to eradicate these ideas and practices in the marketplace. But this consumer community might be so dedicated to its creative ideas and practices that it would engage in an enduring struggle against the pressures from these companies and challenge the current criteria of creativity. This scenario is illustrated in the case of the enduring struggle between the music-downloading communities and the record industry (Giesler 2008). Due to the wide spread nature of the music-sharing and music-
remaking practices supported by some consumer-created software and web sites, the record industry has lost millions of dollars. To fight against these consumer communities, the record industry takes advantage of the current copyright laws that protect the interests of dominant companies and has initiated legal activities against some music-downloading web sites and music sharers. The music downloading community also fights back with various strategies. At present, although some companies co-opt some of the creative practices of the music-downloading community and the two parties show some promise, Giesler (2008) observes that this struggle is continuing. This struggle is more than a symbolic rebellion merely happening in consumers’ minds (Frank 1997; Heath and Potter 2004) but a substantive power struggle, which greatly impacts the economic power of the record industry and possibly the financial survival of some companies and the legal survival of this community.

For some consumer communities, such a substantive power struggle is quite possible. A consumer community’s creative ideas and practices cannot always comply with the interests of commercial companies in a specific market. Also, a consumer community might explicitly resist the commercialization of their creative ideas and practices by any company. If this community sees some of its ideas and practices as core components of its identity, its members will adhere to these ideas and perform these practices in their daily consumption activities to actualize and express their ideal identity. But, if these ideas and practices substantively threaten the interests of companies, the companies would try all possible methods or tools (including resorting to current copyright laws) to delegitimize and extinguish these ideas and practices. As a result, a
power struggle between the two parties will begin. Embedded in such a consumer community, consumer creativity would reflect this struggle.

3.5 Summary of Berman’s View of Consumer Creativity

Berman (1972, 1988) assumes that modern individuals have multiple, dynamic, and contradictory identities, which consist of different and potentially conflicting values, norms, and goals. Based on this assumption, Berman conceptualizes creativity as an ongoing, community-based process in which individual consumers build their ideal identities and express their sense of self. This process is full of paradoxes and conflicts and has rich political and cultural implications. There exist paradoxes and conflicts at the individual, community, and society levels; and consumer creativity reflects these paradoxes and conflicts.

I select Berman’s (1972, 1988) view of creativity as my theoretical lens for two reasons. (1) The political-cultural view of creativity is rarely applied in the marketing literature on consumer creativity in the context of dynamic consumer communities. Berman’s (1972, 1988) emphasis on paradoxes and conflicts involved in creativity as well as the political implications of creativity helps us to expand our understanding of the creative process of a consumer community and the power relationships within a consumer community and between a consumer community and companies. This emphasis also helps us to expand our understanding of the company-consumer co-creation process and has rich managerial implications for companies that try to take advantage of consumer creativity. (2) Berman’s (1972, 1988) assumption of modern individuals helps us to expand our understanding of the multiple motivations that drive
individual consumers to co-create with fellow community members, and related values underlying these motivations. For example, this assumption would help us to understand why some consumers behave differently in different contexts (e.g., working at companies, or engaging in a consumer community’s creative activities) and how they interpret their creative experiences in these different contexts.

With Berman's view (1972, 1988) as my theoretical lens, I seek to contribute to the marketing literature on consumer creativity by further contextualizing consumer creativity in a context of a consumer community that is full of paradoxes, conflicts, and ideological struggles (e.g., the Free/Open Source Software community). This thesis aims to answer the following research question: How do we come to understand consumer creativity in a context wrought with paradoxes, conflicts, and ideological struggles at the individual, community, and society levels? Specifically, (1) How do individual consumers interpret their quest for creativity (e.g., their motivations, their creative process and products)? (2) How do individual consumers negotiate the identity self-expressive aspects of creativity in the face of social judgment within their community and in society? (3) How do individual consumers interact with each other and with companies to build/express/actualize their identities in the process of creating their common products (e.g., an idea, an experience, or a solution)? (4) What are the political, cultural, and managerial implications of consumer creativity?

In the following Chapter, I will explain my methodology to empirically explore contextualized consumer creativity and the related political, cultural, and managerial implications.
Chapter 4

Methodology

This study has two objectives: (1) to further contextualize consumer creativity in a consumer community that abounds in paradoxes, conflicts, and ideological struggles and thereby (2) to explore the political implications of consumer creativity and the cultural meanings created, contested, and experienced by consumers in their creative activities as well as managerial implications. Because consumers’ creative activities are increasingly conducted through the Internet, this current study seeks to achieve its objectives by examining the thoughts, feelings, and behaviors of consumers of an online consumer community. In addition, because one central type of conflict as Berman (1972, 1988) suggests is that of ideological conflict and members of the FOSS community (an online community) generate rich ideological discourses in their daily creative activities, I selected the FOSS community as my cultural site. Because the studied interactions, conflicts, and related political and cultural implications as Berman argues are sensitive to situational contexts, I adopted a netnography methodology (Kozinets 2002a). This method helps us to get a grounded knowledge, to dig into the meanings created and experienced by the informants in their everyday life, and to capture the contexts of intrapersonal tensions, the intra-community interactions, and the interactions between a consumer community and companies by examining the consumers’ everyday discourses that reflect their thoughts, feelings, and behaviors (Glaser and Strauss 1967; Adler and Adler 1987).
Data were collected from direct interviews (e-mail and phone interviews), online archives of consumer discourses (threads, blogs, and visual discourses) of selected FOSS websites, and some artifacts (i.e., published interviews of FOSS programmers, articles and books about FOSS). Regarding data collection, I followed a data-driven procedure. For example, I selected the web site of the Emacs project community (a well-known sub-community of the FOSS community) as my first netnographic site to download needed threads. The selected threads reflect at least one of the four characteristics of creativity (self-expressiveness, process, social judgment, innovativeness) and at least one level of conflict as Berman suggests. These threads and web sites helped me to identify individuals to interview. Extra threads, web sites, and interviews were selected or recruited until no new themes would emerge. Analysis and interpretation followed a constant comparative method (Glaser and Strauss 1967). As for the relevant ethical issues, I followed the recommendations about ethics in internet-based research by Kozinets (2002a) and Blackstone et al. (2008).

4.1 The Free/Open Source Software (FOSS) Community as a Cultural Site

The free/open source software (FOSS) community consists of two subgroups: the free software (FS) subgroup and the open source software (OSS) subgroup. Both subgroups share the philosophy of open source code of software—any person can get access to, copy, modify, and redistribute the source codes of software. The FS subgroup requires that the source code of any software derived from free software must be open. This requirement prevents companies to develop proprietary software based on the open source code of any free software. In contrast, the OSS subgroup allows companies to
develop proprietary software based on the open source code of OSS. Both subgroups allow companies to profit from offering training and service to consumers of free software and open source software. Using its producing power, the FOSS community has strived against the global proprietary software companies to restore the freedom of modifying and redistributing software source codes during the last three decades. Paradoxically, the FOSS community also cooperates with proprietary software companies, presenting several challenges to the reviewed studies on consumer creativity in Chapter Two. Specifically, the current marketing literature cannot sufficiently explain the following paradoxes, conflicts, and ideological struggles experienced by FOSS programmers.

At the individual level, FOSS community members experience multiple intrapersonal paradoxes and conflicts. For example, the individual members experience conflicting values: collectivism and individualism, egalitarianism and elitism, and altruism and instrumentalism. Many FOSS programmers work on FOSS projects for the values of FOSS as well as improved employment opportunity in proprietary software companies. At the community level, the interactions among members are more than harmonious collaboration. The community members engage in interpersonal competition to promote their own creative code to the community. Losing in this competition could make the contributors feel frustrated rather than fulfilled. It is usual that some of a member’s ideas are rejected by the authoritative members and even may be criticized, blamed, or laughed at by other community members. Also, the FS subgroup and the OSS subgroup debate and compete as well as collaborate with each other. At the society level, on one hand, while collaborating with companies, the FOSS community adopts diverse
strategies to avoid being co-opted or controlled by these companies. For example, the
FOSS community creates their own brands and licenses for their software projects to take
advantage of the current legal systems (which originally protect the proprietary software)
to protect consumers’ freedom to copy, modify and redistribute the source codes of the
FOSS. On the other hand, companies provide financial and technical support to some
FOSS projects but require some controlling or influencing power over them. The
previous studies on consumer creativity and value co-creation cannot sufficiently explain
these challenges.

In the 1960’s and the early 1970’s, copyright laws were not applied to software.
The source codes of DEC and UNIX operating systems were freely distributed among
users who collectively tested them, modified them, and contributed to their development
(Rosenberg 1998). In 1979 companies began to commercialize their software, forbidding
users to freely modify and redistribute the source codes of software under the copyrights
law (Bretthauer 2002). In 1984, to restore the lost paradise of freedom, Richard Stallman
launched the global free software (FS) movement attacking these companies (Rosenberg
1998). He and his supporters developed their own source code—GNU (the acronym for
GNU’s Not UNIX) that can be freely modified and distributed. In 1985, he set up the
Free Software Foundation to preserve, protect and promote the freedom to use, study,
copy, modify, and redistribute computer software, and to defend the rights of Free
Software users” and to support … the right to write software unimpeded by private
monopolies” (What is the Free Software Foundation?). In 1989, Stallman released the
first version of the GNU General Public License (GPL), whose core is the concept
copyleft. Informed by the copyrights law, one weapon of companies to defend their
politically protected monopoly rights” (Evans 2005, p. 86), Stallman created this concept to filter out the mainstream value of private ownership behind this law. It is difficult if not impossible to co-opt the software under the GPL. Under the GPL, companies are allowed to make money from free software only by providing training and service to consumers of the free software—the space of value co-creation is limited. If a firm develops software based on free software under GPL, the firm must open its own deritive codes to the public.

When Stallman worked on his GNU project, researchers at the University of California at Berkeley developed their own freely redistributed source code and operating systems labeled with Berkeley Software Distribution (BSD) (Bretthauer 2002). However, the BSD license allows commercial developers to be involved in OSS projects and to develop proprietary software packages based on modified BSD code. The term open source software (OSS) was created in late 1997 and early 1998, formally symbolizing the birth of the OSS movement within the FS movement. This term denotes a sense of liberty for any parties including users and proprietary software companies. The users of the OSS can freely modify and redistribute its source code; so, the OSS movement still challenges the value of private ownership. However, companies can join OSS projects and profit on any modified form of OSS; so, the OSS movement provides a bigger space for value co-creation with companies and for the value of private ownership. By deradicalizing its values and practices, the OSS movement gets technical and human resource support from companies and attracts more support from the mass media and the general public than the FS movement (O’Mahony 2002). Since then, the idealist-like FS movement and the realist-like OSS movement coexist in the FOSS community, competing for existing and
potential adherents and allies and cooperating together but debating about the community’s future.

The FOSS movement gave birth to the FOSS community. Worldwide developers linked by the Internet engage in online interactions, develop and test software for themselves and other users, and provide technical support to each other. Through their online and offline discourses, they (re)frame the problems in the software marketplace and corresponding solutions, and construct their ethos, group identities, enemy identities, language, symbols, and the meanings of software, technology, and software development processes (Szczepanska et al. 2005). As both producers and consumers, these developers co-create the FOSS community centered on their unique software development-consumption philosophy.

The FOSS movement has changed the landscape of the global software market with increasing market share of FOSS programs (Bagozzi and Dholakia 2006). For example, the Apache program gained nearly 74% of the web server market in 2007 (“Web Server Survey”). To reduce their budgets and the negative effects of the global monopoly of software giants, and to utilize the proved quality of the FOSS, several Brazilian cities passed laws requiring the use of FOSS and France, Argentina, and the European Union have considered similar edicts.

In response, companies adopt diverse strategies. Some companies (e.g., IBM, Oracle, HP) become involved in OSS projects to learn knowledge from the FOSS community, to build a good relationships with the FOSS developers and users, and to influence the governance of the OSS projects and future technical standards (Lerner and Tirole 2005). Some (e.g., Microsoft, SUN) adopt the FOSS development models to
improve their own software development effectiveness and efficiency. Some (e.g., Microsoft, IBM) develop proprietary software on the platform of some OSS to target the users of these open source software. Finally, some (e.g., Microsoft) spread negative comments characterized by FUD (fear, uncertainty, and doubt) about the FOSS to counterframe the FOSS movement (Szczepanska et al. 2005).

The increasing global market of FOSS, the increasing support of foreign governments, the vehement intra-community debate, and the complex confrontation and cooperation practices of and the heated ideological contests between this community and the dominant companies attest that the FOSS community is a proper cultural site to examine the tensions consumers experience in their creative activities and the political and cultural meanings of these activities. Previous netnographic studies of FOSS communities have yielded rich understandings of self-realization (Hemetsberger 2005), the cultural codes in discourses (Hemetsberger 2006), cultural contradictions (Gosain 2003), and emerging organization forms (O’Mahony 2002), manifesting its usefulness as a research site.

4.2 Data Collection

In the summer of 2006, when I complained about the high price of Microsoft Office program to a friend, he suggested that I should download the OpenOffice.org program. He told me that the OpenOffice.org program was not only free of charge but also worked as well as the Microsoft Office program. Then I downloaded this program and began to read articles about FOSS, especially those written by Richard Stallman and Eric Raymond. In the past four years, I frequently visited the web sites of the Free
Software Foundation, the Emacs project, and the Debian project as well as personal web pages of Stallman, Raymond, and Linus. I tracked the development of the FOSS movement in China by reading news and blogs of leading figures of the FOSS community in China. In June 2009, I, as a supporter of FOSS, joined the Zeuux project community (a free software project community in China). Observing the interactions among my fellow Zeuux community members and my own communications with some of them further deepened my understanding of the creative activities of FOSS programmers. With this personal, although limited, experience with FOSS, I have become increasingly interested in the FOSS phenomenon; and I have gradually internalized the values of freedom, public interests, and egalitarianism promoted by the FOSS community.

In addition, my research process related to this thesis gave me a valuable opportunity to learn more about the FOSS community. For example, in May 2009, when I posted my recruitment notice, Letter of Information, and Consent Form to the mailing list(s) of some FOSS project communities, I did not follow the practice of using the plain text format in my e-mails (this practice reduces the size of an email and makes an email easier to read) because I did not know this practice at that time. Two days later, I received an e-mail in which the author (who was a programmer of a project) expressed his dissatisfaction (if not angry) with me and advised me to read the policies of the project community before I would post any other information. In fact, when I posted my recruitment notice and information letter, I had a big concern that I might violate some unknown community rules. This programmer truly helped me to learn this practice and I sincerely thanked him for pointing out my fault. More importantly, this episode made me
understand why many newbies of some project communities usually put such a sentence at the start of their postings: “I apologize for asking silly questions as a new comer.” Such a sentence does not aim to express one’s sense of humor but to show humbleness to unknown senior community members and to avoid potential harsh scolding by these senior community members. From this episode, I personally experienced the existence of a hierarchy built on cultural capital (e.g., technological expertise, communal norms) in an egalitarian consumer community.

With my personal immersion in the FOSS community as a background, I collected data from the following three sources: direct interviews, online archives, and some artifacts created by the FOSS community.

4.2.1 Direct Interviews

E-mail and phone interviews consist of my main data source. This is why I first discuss this source in this thesis although I first collected data from the other two sources to better know the context of the FOSS community and later recruited informants by posting my recruitment notice and information letter and by contacting some FOSS programmers directly.

I posted my informant recruitment notice, Letter of Information, and Consent Form to 30 FOSS project communities (posting to one or two mailing lists of each project community) and directly e-mailed my Letter of Information and Consent Form to 65 individual FOSS community members. Seven individuals responded to my notices posted to selected project communities and agreed to do interviews with me. Among the 65 individuals who received my recruitment notices directly, 30 individuals were members
of certain FS project communities; and the other 35 individuals were members of certain
OSS project communities. All of these 65 individuals were frequent contributors to
certain mailing lists; and their postings reflected ideological and/or technological
disagreements among FOSS community members. Nine of the 65 individuals agreed to
interview with me. In total, I conducted complete interviews with 14 FOSS community
members, with two other informants dropped off due to their lack of time. These
informants came from different counties (including China, Germany, the Netherlands,
United Kingdom, and USA) and different project communities (including Debian, Emacs,
Gentoo, Org-Mode, Linux Virtual Server, Wine, and Zeuux), with different educational
backgrounds (from high school students to graduate degree holders). Among the
informants who disclosed their ages, they ranged from 16 to 47. They are all male
community members. Of these 14 informants, one was a member of an OSS project, one
joined both a FS project community and an OSS project community, and all the others
were from specific FS project communities (this data source bias is partially balanced by
downloading blogs, postings, and articles written by some members of other OSS
projects). Details of these 14 interviewed informants are provided in Table 4-1.
TABLE 4-1
Demographic Information of Informants

<table>
<thead>
<tr>
<th>Pseudo Name</th>
<th>Age</th>
<th>Country</th>
<th>Community/Communities</th>
<th>Highest Degree/Diploma</th>
<th>Interview Format</th>
<th>Details of Interview</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>John</td>
<td>17</td>
<td>United Kingdom</td>
<td>Debian (FS)</td>
<td>e-mail</td>
<td>12 rounds of e-mail interview (from 2009/08/24 to 2009/08/29); 42 pages of transcript of e-mail exchanges.</td>
</tr>
<tr>
<td>2</td>
<td>Mark</td>
<td>30</td>
<td>USA</td>
<td>Debian (FS)</td>
<td>e-mail</td>
<td>10 rounds of e-mail interview (from 2009/08/23 to 2009/10/31); 26 pages of transcript of e-mail exchanges.</td>
</tr>
<tr>
<td>3</td>
<td>Tom</td>
<td>16</td>
<td>USA</td>
<td>Indonesian</td>
<td>e-mail</td>
<td>12 rounds of e-mail interview (from 2009/08/24 to 2009/09/15); 19 pages of transcript of e-mail exchanges.</td>
</tr>
<tr>
<td>4</td>
<td>Levy</td>
<td>44</td>
<td>Germany</td>
<td>Debian (FS), Emacs (FS), Org-Mode (FS)</td>
<td>e-mail</td>
<td>12 rounds of e-mail interview (from 2009/08/19 to 2010/06/20); 51 pages of transcript of e-mail exchanges.</td>
</tr>
<tr>
<td>5</td>
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<td>47</td>
<td>United Kingdom</td>
<td>Debian (FS)</td>
<td>e-mail</td>
<td>8 rounds of e-mail interview (from 2009/08/24 to 2010/09/01); 39 pages of transcript of e-mail exchanges.</td>
</tr>
<tr>
<td>6</td>
<td>Brown</td>
<td>N/A</td>
<td>Germany</td>
<td>Gentoo (FS)</td>
<td>e-mail</td>
<td>6 rounds of e-mail interview (from 2009/09/21 to 2009/10/04); 28 pages of transcript of e-mail exchanges.</td>
</tr>
<tr>
<td>7</td>
<td>Arthur</td>
<td>21</td>
<td>United Kingdom</td>
<td>Wine (FS)</td>
<td>e-mail</td>
<td>10 rounds of e-mail interview (from 2009/09/09 to 2010/06/22); 41 pages of transcript of e-mail exchanges.</td>
</tr>
<tr>
<td></td>
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<td>Country</td>
<td>Organization</td>
<td>Degree</td>
<td>Contact Method</td>
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<td>---</td>
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</tr>
<tr>
<td>8</td>
<td>Stephen</td>
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<td>The Netherlands</td>
<td>Org-Mode (FS)</td>
<td>Graduate</td>
<td>Phone</td>
</tr>
<tr>
<td>9</td>
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<td>China</td>
<td>Linux Virtual Server (OSS)</td>
<td>Graduate</td>
<td>Phone</td>
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<td>10</td>
<td>Songbai</td>
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<td>China</td>
<td>Zeux (FS) Linux Interest Group (OSS)</td>
<td>Bachelor</td>
<td>Phone</td>
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<tr>
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<td>Bachelor</td>
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<tr>
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<td>Zeux (FS)</td>
<td>Graduate</td>
<td>Phone</td>
</tr>
<tr>
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<td>German</td>
<td>Gentoo (FS)</td>
<td>N/A</td>
<td>e-mail &amp; phone</td>
</tr>
<tr>
<td>14</td>
<td>Wisdom</td>
<td>41</td>
<td>China</td>
<td>Zeux (FS)</td>
<td>Bachelor</td>
<td>e-mail &amp; phone</td>
</tr>
</tbody>
</table>

**Notes:**

1. All the transcripts of e-mail interviews were single-spaced. To keep the original format of the e-mails, the specification of four margins of the page is 0.79 inch. Font: Courier New, 10.
2. All transcripts of phone interviews were single-spaced, with four margins as follows: top: 1 inch; bottom: 1 inch; left: 1.25 inches; and right: 1.25 inches. Font: Times New Roman, 12.
E-mail and phone interviews were conducted with the informants (7 email interviews, 5 phone interviews, and 2 mixed interviews). I did unstructured interviews (McCracken 1988) as a part of this netnography (Kozinets 2002a). I started my interviews with questions about basic social demographic characteristics (e.g., age, gender, education, employment, years of involvement in the FOSS community) and then asked a grand tour question – "Would you please tell me something about your experience with this community?" Following questions emerged from the answers of informants. As for phone interviews, I also engaged in ongoing e-mail exchanges with some informants after phone interviews to get further information about their own interpretations of their experience within the FOSS community. As for e-mail interviews, after the initial two or three interviews, further interviews were held until no new themes emerged from the collected data. Depending on different informants, two to twelve rounds of e-mail exchanges were made. Corresponding e-mails and transcripts of phone interviews were analyzed as parts of the data collected (transcripts of phone interviews in Chinese were translated into English).

4.2.2 Online Archives of Selected Netnographic Sites

After selecting relevant FOSS websites as my netnographic sites, I downloaded relevant threads, blogs, and visual discourses as another source of data. The selected netnographic sites collectively satisfy three criteria: (1) centering around at least one FS and one OSS project, (2) having enough ideological discourse to explore the targeted political implications, (3) having an adequate account for the evolution history of the FOSS community. The first criterion guarantees that at least one selected site provides data about how consumers holding the FS or OSS philosophy engage in a concrete
creative project. The second one guarantees that we have sufficient data to identify and analyze the political implications of individual consumer creativity in the context of consumer community. The third one guarantees that we have sufficient data to historically analyze the both collaborative and confronting dynamics between the FS and OSS subgroups and between the FOSS community and companies/copy right laws because the data from either a FS or an OSS project might not provide enough data for this purpose. In addition, the archives of the selected web sites should be publicly accessible. The fourth criterion reduces the ethical risk to a certain degree (Blackstone et al. 2008).

Four web sites were initially selected: http://www.gnu.org/software/emacs/, http://www.apache.org, http://www.fsf.org, and www.opensource.org. The first web site is of a FS project—GNU Emacs. The second web site is of an OSS project—Apache, which is sponsored by many companies including Microsoft, IBM, and HP. The last two web sites are the official web sites of the Free Software Foundation and the Open Source Initiative respectively, provide formal historical documents of this community, record the ongoing intra-community ideological contests, and have rich archives of discourses of community members. Threads rich in ideological discourses in the mailing lists of these web sites were tracked and downloaded from archives according to the criteria of richness, descriptiveness, and relevance recommended by Kozinets (2002a). Blogs and visual discourses were also downloaded according to these criteria. The results of analyzing the data collected from the initial four web sites drove my selection of further data (i.e., data collection should proceed until no new themes emerge from the collected data).
4.2.3 Artifacts

The artifacts including published interviews, articles, and books of some FOSS movement leaders are the third source of data. This type of data provides general background information about the creative activities of FOSS programmers and was compared with the data collected from usually common FOSS programmers (i.e., downloaded threads as well as transcripts of interviews I conducted) during my data collection and analysis process.

4.3 Ethical Issues


Regarding e-mail and phone interviews, all informants were provided the contact information of the Unit Research Ethics Board, Queen’s School of Business, and the General Research Ethics Board, Queen’s University. All informants were allowed to stop interview, to refuse to answer any questions, and to withdraw from this research as they wanted.
4.4 Data Analysis

This study is based on the individual-level analysis of consumer creativity. Data was analyzed and interpreted during and subsequent to the data collection to seek patterns of meaning or to formulate themes (Spiggle 1994). Every posting was analyzed as a unit and was compared with other old and new postings to identify common themes. The same analysis was done to every thread and every selected web site as well as every interview transcript. During this process, I downloaded additional threads from additional web sites or did additional interviews to seek disconfirming evidence to challenge my interpretation. Data collection and examination continued until no new themes were found and all the extant themes were well grounded in the data. A copy of themes that emerged from collected data was sent to five informants to seek their feedback about my interpretation. Two informants responded: while they generally agreed with my interpretation, they also provided some new interesting insights. Their feedback was integrated into the themes that are presented in the next Chapter.
Chapter 5

Netnographic Themes

In Chapter Three, we defined consumer creativity as an ongoing process of self-expression that consumers engage in to individually and collectively generate something that is socially judged as innovative and appropriate. This process is rich in paradoxes and conflicts at the individual, community, and society levels. In Chapter Four, we have briefly reviewed the history of the FOSS community, in which FOSS programmers collectively develop FOSS and share FOSS with each other. For FOSS programmers, FOSS is an embodiment of their creativity (Stallman 1985). While developing and continuously upgrading their programs, FOSS programmers invest their “desires and passions” (Medosch 2005, p. 114) and express their sense of self in programs they develop (Weber 2004). During their program development process, FOSS programmers often debate with each other about which lines of code and technological directions are technologically innovative and appropriate and thereby should be adopted by their specific program communities. And, such technological debates are often intertwined with ideological debates—for many FOSS programmers, technological issues are always related to appropriateness in term of moral values of freedom, public interests, and egalitarianism. Besides such debates within the FOSS community, FOSS programmers have also engaged in technological and ideological debates with proprietary software companies since the birth of the Free Software Movement. Thus, we have argued in Chapter Four that we can expand our understanding of consumer creativity by examining the creativity of the FOSS community.
In Chapter Three, we have formulated four research questions: (1) How do individual consumers interpret their quest for creativity (e.g., their motivations, their creative process and products)? (2) How do individual consumers negotiate the self-expressive aspects of creativity in the face of social judgment within their community and in society? (3) How do individual consumers interact with each other and with companies to express their identities in the process of creating their common products (e.g., an idea, an experience, or a solution)? (4) What are the political and cultural implications of consumer creativity? To answer these research questions, I analyzed transcripts from fourteen interviews (7 e-mail interviews, 5 phone interviews, and 2 mixed interviews; see Table 3 for demographic information of my informants; transcripts of interviews in Chinese were translated into English), downloaded threads and blogs from the web sites of several FOSS projects (three FS projects: Emacs, Debian, and Org-Mode; and two OSS projects: go-oo.org and Apache), online articles, books, and artistic works by FOSS programmers.

Three themes emerge from the data: recreating a paradise in cyberspace, troubles in paradise, and fusing Romanticism and rationalism. Collectively, these themes suggest that FOSS programmers fuse the ideologies of Romanticism and rationalism, both of which influence their perspective about their own creativity and sense of self and guide their interactions with each other and with proprietary software companies in their creative process. Detailed discussion of these themes is presented in the balance of this Chapter. Because FOSS programmers like to see programming as an “art” (quoted from Guido van Rossum, the creator of Python; cited in Littler 2005), “a craft” (quoted from Mike, a German developer of the Gentoo Community who shifted from Windows to
Linux originally for the latter program’s technological performance but later finds that he loves Linux for its philosophy), or “handicraft” (quoted from Levy, a programmer of Emacs, Org-Mode, and Debian projects), terms that allude to the Romantic perspective of creativity, we will first discuss FOSS programmers’ Romantic view of their creativity as our focus in Theme One. But as we will see, the Romantic dimension of creativity is also discussed in Theme Two and Theme Three.

5.1 Theme One: Recreating a Paradise in Cyberspace

The history of the FOSS community is like a drama of recreating a lost paradise. In the public discourses of the FOSS community, the early 1960s was a golden age when programmers as a creative community enjoyed the freedom to run, copy, distribute, study, modify, and improve programs. But in the late 1960s, some software companies began to forbid such behavior by closing the source code of their programs and by resorting to copyright laws to punish violators. Programmers lost their paradise where they could develop, display, and actualize their creativity and help each other with their creativity. In 1984 Stallman launched the Free Software Movement to fight against proprietary software companies, calling for people to “build a new land in cyberspace” (quoted from an online paper, Stallman 2001a) by creating and using free software. Since then, in their mainly Internet-based community, or their new paradise, FOSS programmers seem to have regained their freedom and enjoyment to engage in their unique creative production/consumption practices.

The experience of losing a paradise and recreating a lost paradise has been expressed by FOSS programmers’ Romantic discourses about their creative activities.
Historically, Romanticism emerged as a critique of the instrumental rationality-based modernity that began to emerge during the period of the Enlightenment Era. Some Romantics (e.g., Rousseau, Burke, Coleridge) critiqued modernity based on some pre-modern ideals and values (e.g., the idealized natural world, the natural state of man, communal connectedness over isolation, moral and aesthetic values over instrumental values) and advocated for the return to these pre-modern ideals (Löwy and Sayre 2001). Romantic sensitivity is also closely related to a sense of loss, a conviction that modern individuals and society as a whole have lost something precious that existed in a perceived past. In modern society, the qualitative values of holism (e.g., harmony between human beings and the natural world), imagination, spontaneity, passion, and social connectedness have been increasingly displaced by calculative, instrumental, and cold rationality, alienation between human beings and the natural world, and alienation between individuals or dissolution of communities. With this displacement, modern individuals experience a strong sense of being exiled from an old paradise and are thus longing for its return, where individuals once lived in harmony with the natural world and each other.

For Romantics, the natural world not only is wild or unsaddled, dynamic, fecund with mystical forces, but also embodies various virtues of morality and goodness. These virtues are seen to inspire human beings, lighting up the inner creativity of an artist, which is the archetypical image of creative individuals in Western culture (McKusick 2001). So, existing in harmony with the natural world is not only enjoyable for its own sake but also helps human beings to fully express their inner creativity, imagination, and passion, to reach their full potential, and to become more authentic. In addition, in this
mythologized lost paradise, human beings live in harmonious communities, connected with each other organically, genuinely helping and sharing with each other. This is considered to be the natural state. But the advancement of a cold, calculative rationality-based capitalism is seen to have destroyed this golden age. As a result, Romantics expressed their strong desire of returning to the lost era, the old perceived paradise. This Romantic nostalgia is illustrated in the FOSS community.

Theme One has five sub-themes that encapsulate the above narrative. The first sub-theme — Returning to the Natural World” tells us that FOSS programmers perceive that they re-merge with the natural world during and after their creative process. The second sub-theme — Returning to Human Nature” tells us that FOSS programmers’ creative activities help them to get a sense of returning to human nature characterized by sharing and helping. The other three sub-themes tell us that the FOSS community’s creative process is motivated and guided by the Romantic ideologies of freedom, public interests and egalitarianism. Theme One illustrates that the creative narratives of FOSS programmers hold a strong Romantic perspective surrounding community-based creativity and are inclined to see their community as a spiritual home, a paradise of freedom, public interests and egalitarianism.

5. 1.1 Re-merging with the Natural World

A myth about the old paradise of programmers has been repeatedly discussed in the FOSS community. This myth recounts how early programmers (who called themselves hackers and whose practices included creating art and beauty on computers, Levy 1984) freely studied, modified, wrote, and redistributed programs at the
Massachusetts Institute of Technology's Artificial Intelligence Laboratory (AI Lab), the Garden of Eden perceived by Stallman. In a lecture, Stallman shared his experience at the AI Lab to illustrate how hackers freely engaged in creative activities in the age before "commercial software" "destroyed" (quoted from this lecture) their freedom and how he fought back by launching the Free Software Movement:

So, that was the AI lab. But what was the culture of hackers like aside from their anarchism? In the days of the PDP-1 [Programmed Data Processor-1 was the first computer in Digital Equipment Corporation's PDP series] only one person could use the machine, at the beginning at least. Several years later they wrote a timesharing system, and they added lots of hardware for it. But in the beginning you just had to sign up for some time. Now of course the professors and the students working on official projects would always come in during the day. So, the people who wanted to get lots of time would sign up for time at night when there was less competition, and this created the custom of hackers working at night. Even when there was timesharing it would still be easier to get time, you could get more cycles at night, because there were fewer users. So people who wanted to get lots of work done, would still come in at night. But by then it began to be something else because you weren't alone, there were a few other hackers there too, and so it became a social phenomenon. During the daytime if you came in, you could expect to find professors and students who didn't really love the machine, whereas if during the night you came in you would find hackers. Therefore hackers came in at night to be with their culture. And they developed other traditions such as getting Chinese food at three in the morning. And I remember many sunrises seen from a car coming back from Chinatown. It was actually a very beautiful thing to see a sunrise, cause' that's such a calm time of day. It's a wonderful time of day to get ready to go to bed. It's so nice to walk home with the light just brightening and the birds starting to chirp, you can get a real feeling of gentle satisfaction, of tranquility about the work that you have done that night.


This quotation is part of a myth about the old anarchic paradise, which was embodied by the AI Lab where hackers could wildly "unlock doors" (a symbol of rules
that constrained hackers’ opportunity to get access to computer terminals to hack programs or to develop, display and actualize their creativity) and where hackers focused on hacking rather than treated programming as merely a “job” that brought specific amount of money or led to any “commercial interests” (quoted from this speech). This quotation illustrates how Stallman felt about his experience of creating programs with his fellow hackers in the AI Lab. His recollection of this experience is full of beautiful images of the natural world: the sun rose slowly, spraying bright light down to his body; birds were chirping in the air and on trees in the calm morning; and he walked in this natural beauty back home. After one night of creative but usually intense, energy-consuming coding work with other hackers, he felt the real gentle satisfaction and tranquility about his work as he walked back home.

Although he talked of his work being done at night (a typical symbol of creativity in Romanticism, see McKusick 2005), he could not and we cannot see his programs, the product of his creativity—programs can only exist virtually! In a certain sense, his creativity is the beautiful scene he described here: the invisible creativity becomes present in the mind of Stallman through his ability to perceive and appreciate the beauty of the natural world around him. Implicitly, his spiritualistic tranquility came from and could not be separated from writing beautiful code and congenially mingling with his fellow hackers with whom he co-created the code in the sacred, mythologized AI Lab. In a certain sense, his creative experience at night started his journey of walking back to a spiritual home, a home that Romantics had longed for and celebrated and where imaginative human beings merge with the natural world.
The mythological link between the natural world and FOSS programmers’ creativity is also illustrated in the practice of using images of animals, plants, and other natural objects as avatars or logos for FOSS projects. For example, the logo of the Debian project is an image of a swirl, a symbol of a fiddlehead fern that symbolizes new life in the indigenous Polynesian culture of New Zealand; and the logo of the gNewSense project (a free software project that provides an Ubuntu based free software distribution without non-free binary blobs in the kernel) is an image of a tree, in which “the tree represents freedom, a strong structure that supports Life (with its branches and leaves) and Earth (with its roots)” (quoted from a programmer’s posting, available at: http://wiki.gnewsense.org/ArtworkProjects/NuevoSentido#toc4). This practice of using natural images as project logos also suggests another way of re-merging with the natural world, a way that is also related to FOSS programmers’ creativity. Let’s look at two avatars (Figure 5-1) of the GNU project (an operating system project launched by Stallman to replace the proprietary Windows operating system):

![Avatars of the GNU project](http://www.gnu.org/graphics/heckert-gnu.html)

![Avatars of the GNU project](http://www.gnu.org/graphics/annoy-gnu-dyn-duo.png)

**Figure 5-1**

**Avatars of the GNU project**
The image of the bold gnu head (see Figure 5-1) is a popular avatar of the GNU project. Gnus, or wildebeest (Dutch for “wild beast”), live in the plains and open woodlands of Africa. Some studies find that herds of gnus might use a kind of swarm intelligence (i.e., the global intelligence produced by collective behavior of decentralized, self-organized systems of natural or artificial agents who interact with each other locally) in their annual migration to new pastures (Gueron and Levin 1993; De Schutter, Theraulaz, and Deneubourg 2001). Although predators such as lions, hyenas, cheetahs, leopards, and crocodiles (who collectively are usual symbols of greed, cruelty, craftiness, and sham) can kill and eat gnus, gnus are very strong and can inflict considerable injury on their predators. The bold, gregarious, and intelligent nature of gnus alludes to how FOSS programmers see themselves. By sharing and helping each other with their creative ideas, FOSS programmers can collectively create excellent programs to defeat strong but immoral proprietary software companies in the marketplace. The original version of the gnu head (created in 2007) is milder than the GNU head in Figure 5-1 (created in 2010) that is perceived as “bolder” (quoted from the web page of http://www.gnu.org/graphics/heckert_gnu.html) and is now used by the Free Software Foundation on any new GNU-emblem items and stickers” (quoted from the web page of http://www.gnu.org/graphics/agnuhead.html). The Free Software Foundation’s current preference for the “bolder” image suggests that FS programmers who see their practice of creating and using free software as a moral movement want to emphasize their moral courage to challenge dominant proprietary software companies who treat users (including FS programmers) as prey (Stallman 1985). This moral courage or the moral dimension of the creativity of FS programmers is more clearly illustrated in the avatar based on the
dynamic duo in Figure 5-1, in which a gnu is painted in the image of Superman played by Christopher Reeve, a cultural icon that stands for a justice force against evil. Clearly, a gnu symbolizes a moral warrior against proprietary software companies, with which GNU community members identify.

Animal images used by FOSS projects are not limited to those of real animals but include those of some mythological animals, which are seen as part of the natural world in mythologies (see Figure 4 for the image of the logo of the Org-Mode project). This is consistent with a practice of Romantic poets: using images in myths to express their aspiration to recreate human community and to live harmoniously with the natural world (McKusick 2005; Butler 1982). In the case of the FOSS community, FOSS programmers use images of some mythological animals with positive associations to show their ideals. Ross A. Laird (a user of the Org-Mode program and a scholar of mythology) comments on the unicorn, the logo of the Org-Mode program (see Figure 5-2), by saying that the unicorn, a mythological animal, is "a symbol of divinity, essentially, of the fusion of purity and power" (quoted from Ross’s posting, available at: http://thread.gmane.org/gmane.emacs.orgmode/11641/focus=11641).
Ross argued:

As to the question of whether or not unicorns still exist (see org FAQ), this falls within the same domain as the question of whether Atlantis exists. The answer (as much as there can be one) is that they do exist, as mythological items that Carl Jung called "archetypal;" they are essential to, and foundational of, human nature. They will always be a part of human culture, and exist timelessly in that sense whether or not they exist in fact.

(available at: http://thread.gmane.org/gmane.emacs.orgmode/11641/focus=11641)

Creating and using the image of unicorn as a mythological part of the natural world is part of human nature—the need to mythologize our life and surrounding natural world. Ross's argument and the practice of the Org-Mode project are consistent with Malinowski's argument about myth: "it expresses, enhances, and codifies beliefs; it safeguards and enforces morality" (cited in Butler 1982, p. 51). This consistency is illustrated in the following quotation:
What is the meaning of the Unicorn on Org's website?

The Unicorn is the logo of Org-mode because:

- Org-mode is the UNICs of ORgaNizers.
- Org-mode is an Emacs mode, so it makes sense to use an animal similar or related to the gnu used for GNU Emacs.
- Org-mode is meant to show you the way, and an animal with two horns can not do this very well, can it?
- Unicorn tears are said to reverse petrification, and wasn't this how we all felt before getting to some degree of time and task management?
- It will take forever to learn everything there is to know about a unicorn.
- A unicorn is a fabulous creature. Org-mode wants to be a fabulous creation.

Using a unicorn was originally Bastien Guerry's idea . . . Bastien writes why he chose a unicorn:

The first reason is not linked to the animal, but to the sounding of the word "Unicorn" - because Org gives you a /uni/que way of producing files in several format (HTML, LaTeX, etc.)

The second reason is that a Unicorn doesn't really exist, it is just something you can dream about, and make others believe it does exist. Just like the perfect organizer.

(Available at: http://orgmode.org/worg/org-faq.php#unicorn; retrieved on 2010/06/24)

A unicorn (i.e., the Org-Mode program) is seen as a fabulous animal who guides users to the correct direction, "allows [users] to do more . . . in an unimposing way," and reverses petrification felt by users when they lacked a powerful task management program that did "not put any limit on what [users] can do" (quoted from Carsten Dominik, the founder of the org-mode project and an astronomy professor who often writes code for the org-mode project when he commutes between his home and university). The unicorn is imbued with the value of freedom as well as a sense of spiritual purity and power.
Considering Figure 5-1 and Figure 5-2 together, we can see that FOSS programmers create FOSS at least partially for reversing petrification or reversing some immoral commercial practices (e.g., closing source code of software and thereby limiting users' freedom) by proprietary software companies. The animals like the gnu and the unicorn are used to express a kind of “dream”—bravely defeating proprietary software companies and recreating a pasture where all programmers and users can freely develop and use software without any imposed-upon constraints.

It is not important whether these animals (e.g., a gnu, a penguin) truly exist and own the virtues of moral courage to fight for freedom, sharing and caring each other, and being creative or whether selected plants (e.g., Debian’s swirl-like fern and gNewSense’s tree) are truly generative and strong. What is important is that FOSS programmers imbue these real or imagined natural objects with virtues as Romantics (e.g., Rousseau, Wordsworth, Hugo) did to animals, plants, stars, and other natural objects (Löwy and Sayre 2001; McKusick 2005).

At its core, FOSS is anything but a product of the "natural world.” It is a piece of technology produced with computers in a lab. However, by linking inspirited animals, real and mythologized, to FOSS, community members are "naturalizing” their creative work. By naturalizing FOSS with animals and plants and then inspiriting these animals and plants with virtues as well as linking their creativity with beautiful, tranquil scenes as Stallman did, FOSS programmers romanticize their creative process and the social space they create. And finally, FOSS programmers romanticize their sense of self and existence. By inspiriting virtues with which they themselves identify into these animals
and plants, FOSS programmers mysteriously re-merge with the natural world that is free, fecund, harmonious, mythological, and vitalized with a strong current of life.

Figure 5-3 visually embodies this naturalizing process. Each image in Figure 5-3 stands for a corresponding FOSS project. Most of these images are related to a real or imagined animal. All these animals seem to live on a “libre planet” in harmony with each other and are centered around the gnu and the penguin who symbolize the moral courage to fight for freedom, suggesting that the community of these animals is harmonious, collaborative, and freedom-oriented. By linking specific FOSS projects to these animals, FOSS programmers link their creativity to animals, which symbolize the natural world where, according to Romanticism, all live in their natural state. So, by co-creating FOSS with each other, FOSS programmers, can also create a “libre planet” which is characterized by harmony, collaboration, and freedom. On this libre planet, one can live as naturally as these free and collaborative animals do.

Figure 5-3

Libre Planet: Working Together for Free Software

(Available at: http://shop.fsf.org/)

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All the above quoted textual and visual narratives of FOSS programmers share one message: in a perceived paradise of creativity, FOSS programmers as creators are re-merging with the natural world. This message suggests the strong impact of the Romanticism narrative on modern individuals' perspective of creativity. One of the defining characteristics of leading thinkers of the Romantic Movement is their enduring engagement with the natural world (McKusick 2005). For Romantics, the myth of the Fall of Adam and Eve from the Garden of Eden symbolized alienation of humanity from the natural world, which in modernity is represented by the emergence of rationality-based industrialization throughout the world. Since the early 17th century, the rising value of rationality and the advancement of industrialization have disenchanted the world for human beings. According to this narrative, values such as communal connectedness are replaced by impersonal exchange as a central aspect of modernity; concrete feelings, senses, and life experiences are replaced by rationalist abstract concepts; social bonds dissolve into solitude in modernist society; and religions and myths are replaced by hard, cold scientific reports—human beings are in a state of exile and are longing to return home (Löwy and Sayre 2001). In response to this disenchantment, Romantics advocated the search for enlightenment in the natural world. Romantics still kept to the view that the natural world was meaningful to human beings' existential state, could inspire human beings' imagination and inner creative capacity, and sought harmony between human beings and the natural world. The image of the natural world became an icon of Romanticism.

The Romantic sense of losing the ideal existential state of human beings living harmoniously with the natural world might become stronger in the mind of contemporary
individuals including FOSS programmers due to the further advancement of industrialization and the perceived centrality of calculative rationality in today's world. This Romantic nostalgia against capitalist modernity is an ongoing, dynamic, cultural tension resulting from the lasting clash between rationalism and Romanticism. The nostalgia of the FOSS community is a reflection of this Romantic nostalgia found in our contemporary consumption domain (see also Thompson and Troester 2002).

There are many examples in the literature of Romantics seeking re-mergence with the natural world by imbuing natural objects with virtues, which then become sources of inspiration to Romantics (McKusick 2005). For example, Vigny praises a dying wolf as a brave, strong, and noble creature; Hugo sees from a primitive forest a "poetics of 'savage harmony,'" which means that each poem should find its form organically without following any rules as each tree, flower, grass, bird, and river exists organically and freely but harmoniously in a beautiful primitive forest (McKusick 2005, p. 429). Just as Rousseau argues that a tree "represents all man's capacity for life, freedom, spontaneity, expressiveness, growth, self development" or "authenticity" (Berman 1972, p. 163), a gNewSense programmer describes the meaning of a version of the logo of the gNewSense program project (which consists of a tree rooted in Earth) as follows: "the tree represents freedom, a strong structure that supports Life (with its branches and leaves) and Earth (with its roots)" (quoted from the programmer's posting, available at: http://wiki.gnewsense.org/ArtworkProjects/NuevoSentido#toc4). Similarly, the logo of the Debian project adopts an image of a swirl, a symbol of a fiddlehead fern that symbolizes new life in the indigenous Polynesian culture of New Zealand. Although in my research I have not found any programmers who directly say that they are inspired by
the natural world in their creative process, all the above quoted textual and visual
narratives of FOSS programmers suggest that FOSS programmers‘ creativity might be at
least motivated by the virtues illustrated by the natural world (which are of courses
imbued by FOSS programmers themselves). For FOSS programmers, all programmers
should challenge proprietary software companies as gnus challenge lions, cheetahs, and
crocodiles; all programmers should collaborate with each other to create their own swarm
intelligence just as gnus use their own swarm intelligence to migrate to new pastures; all
programmers have the right to and should freely express their sense of self and life in
their programming process just as trees, flowers, birds, and rivers freely express
themselves in a primitive forest. During their creative process, FOSS community
members must experience the freedom, courage, nobleness, harmony, and the current of
life of the natural world, free from any constraining rules and profane monetary pursuits
which are rampant in contemporary society. Now we can see that for FOSS programmers,
their creative process (i.e., programming process) is rich in senses of wholeness,
aesthetics, morality, and life. This aesthetically, morally, and existentially natural-world-
based perspective is the antithesis to a rational perspective of creativity that is
instrumental rationality-based, interest-free, and value-free (Sawyer 2006).

The irony is that FOSS programmers who are so immersed in technology strongly
seek connection with the natural world. FOSS programmers are busy in learning new
programming languages and/or developing new programming languages, and are proud
of their technological, programming skills. They usually create programs at a modern
office or a private room equipped with modern devices and the Internet, one modern
symbol of the achievement of human rationality. However, in the perception of FOSS
programmers, their programs, the artificial objects whose code consists of combinations of 0 and 1, mythically become an essential part of their perceived natural world. It seems that the Internet becomes the New Continent waiting for FOSS programmers to explore, to recreate their new paradise, to unlock doors or break down rules that constrain their creativity, and to play with creative ideas. So, with the help of modern artificial devices (e.g., computer) in the imaginative but still artificial world of the Internet, creating something magically or day-dreaming likely becomes a path for, at least some, modern individuals (e.g., FOSS programmers) to return to a perceived natural world, to transcend disenchantment, rationalist abstraction and calculation, and mundane monetary pursuits, in order to return to their spiritual home.

Romantics in the eighteenth century believed that the natural world had a mysterious power to light human beings’ inner imagination and creativity as they believed that there was a mysterious correspondence between human creativity and the natural world. By freely expressing their creativity in artistic works, they re-merge with the natural world. As Romantics, some contemporary consumers like the FOSS programmers in this study perceive that fully expressing their creativity is a way towards the natural world. The above quoted textual and visual narratives of FOSS programmers illustrate the strong impact of the Romantic narrative of creativity on contemporary individuals’ understanding of creativity.

While longing for returning to the natural world for tranquility, FOSS programmers also long for returning to their inner nature—their perceived human nature.
5.1.2 Returning to Human Nature

Songbai, a 22 year old, friendly, optimistic senior student of a university in China, is an active member of the Zeuus community (a famous free software community in China). Our interview was done in the evening before he left his university for Beijing to join a famous transnational OSS company. He believed that one goal of joining a university is to enhance oneself. However, the normal learning style at his university was individual based (i.e., teachers gave lectures and asked questions; students answered these questions individually). In his university life, before joining an on-campus Linux Interest Group in the second year, although he worked hard he often had difficulty to further enhance his knowledge in some areas because he could not communicate with and learn from others. Commenting on this early learning experience, he said: "I felt that I was fighting alone.” After joining the Linux Interest Group, he could learn from his fellow students and highly enjoyed its open in-group communication and learning style. Encouraged by this new experience, he joined several other FOSS project communities such as the Python community and the Zeuux community where experienced community members were ready to share their knowledge with fellow community members. Commenting on his experience in the FOSS community, he said, "I feel I gained a sense of belonging.” He continued:

As for the sense of belonging, because the online world is virtual, you might link virtual things to fake things. In fact, many online things are very real. For example, now I am online and someone asks me a question. I don’t need to ask who he is. No matter where he is, no matter which computer lab he is in, I don’t need to know any such information. I can answer all his questions. I will do my best to help him. This might be because I often asked questions before and many
people unselfishly answered me and helped me. We don’t ask for any compensation but contribute our ideas. We don’t consider compensation. In the online world, including our group, the norm of unselfish contribution is gradually and invisibly formed. We not only share knowledge with each other. Because we are all together in one university, we also introduce this contribution spirit in other areas of our daily life. For example, we often organized some [offline] activities and went outside our campus for entertainment. We really feel we belong to a group. . . . I really feel that I am not fighting alone.

[Note: All interview quotations appear as what informants said in phone interviews or wrote in e-mail interviews.]

For Songbai, belonging to a creative community is closely connected to the norm of unselfish contribution and the practice of helping by sharing knowledge with each other. More importantly, Songbai and his fellow students introduced this spirit of contribution from the FOSS community into other areas of their daily life—sharing has become the way of life for them. And, it is because of this spirit of sharing that he and his fellow students “really” felt they belonged to a group; that is, sharing becomes a life theme for him (Belk 2010). Songbai was born in a rural area before joining his university which is located in a comparatively highly developed big city in China. Like many other ambitious young persons from a rural community or a small city, he might be similarly eager to enhance himself, needing to overcome many social, cultural, and psychological barriers before he can fully adapt to the urban life of a new, big city. Considering his background, we can imagine how lonely he could be when he helplessly met difficulties in his journey of self-enhancement, how strongly he would crave social bonds with others, how big the change in his perception of his existential state due to his engagement in the FOSS community, and how this engagement contributed to his sense of self-growth and self-realization.
For Songbai, the change of his life was connected to the spirit of unselfishly contributing to and sharing with the FOSS community. Studying with classmates in a classroom, but doing so individually did not give him a sense of belonging. It is sharing in the Linux Interest Group that reduced the social distance between him and other students and built the desired social bond. After talking about how he gained a sense of belonging, he continued: “Our [group’s] starting goal was quite idealistic. . . . because at start, free software was very idealistic.” Then, I asked: “What do you think is the ideal of free software?” Songbai answered:

The ideal of free software is to make the relationship between human beings [he paused little bit], to make the society become better. This answer might be abstract. To be concrete, the ideal is sharing among individual human beings, this comparatively primitive thing. Human beings in nature share with each other and help each other. In a contemporary society, people are facing more life pressures, a big pile of pressures; so, to survive, they might change some elements of their nature. But, I think, free software helps human beings to return to their nature.

This quotation has rich implications. First of all, sharing with each other is perceived to be a primitive condition of human beings—part of human nature. Particularly, in a creative domain (e.g., programming), sharing might be a part of the creative process (Belk 2010). However, in a modern society, some external forces can distort this element of human nature. For example, in their old paradise, programmers shared the source code of programs and improvement with each other free of charge like good neighbors or friends (Stallman 1985). But later, the selfish pursuit of “commercial interests” by some community members destroyed the old paradise from within (quoted
from Stallman's lecture at KTH, Sweden, 30 October 1986) because “the need for money drew men into an endless spiral of competition and accumulation” (Berman 1972, p. 185). Also, profit-driven proprietary software companies closed their source code and took advantage of copyright laws to prevent people from helping each other by sharing source code of proprietary programs within the hacker community. That is, calculative commercial considerations destroy human beings‘ natural inclination of sharing, at least in the creative process of the software domain. Songbai’s argument of sharing as one part of human nature echoes the same belief of Stallman, who, in one online article (Stallman 2009), argues: “To stop people from sharing goes against human nature.” Of course, FOSS community members are aware of other parts of human nature, which might conflict with the part of sharing (Stallman 2001b). What at least some of the FOSS community members (e.g., Songbai and Stallman) want to do is to encourage of the spirit of sharing” (cited from the transcript of a speech by Stallman 2001b) and to build a new land full of this spirit.

This argument is consistent with Romantics’ argument that, in a modern society, the dominant cultural practices of quantification distorted and reduced emotion-charged, rich social bonds among individuals (i.e., everyone is linked to each other in a closed-knitted community) into abstract, quantified monetary exchange relationships among isolated individuals (Löwy and Sayre 2001; Kozinets 2002b). For Romantics such as Rousseau, the ideal human relationship is based on “sharing and giving” or “genuine mutuality” free from any instrumental calculation (Berman 1972, p. 316). Fortunately, for Songbai and many other free software programmers, their creative product (i.e., FOSS) and the process of creating this product help human beings to return to their basic human
impulses by allowing people to legally and freely help each other by sharing source code and improvement of free software with each other as peers, comrades, or neighbors of a community (Stallman 1985). Thus, in the minds of some FOSS programmers, their unique creative process is a process in which they return to what they perceive as basic human nature.

How do average community members feel about their Romantic return in their daily life within the FOSS community, their new paradise in cyberspace? The following quotation from Levy might answer this question. Levy is a forty-four year old, passionate programmer in Germany. He frequently contributed code to the Emacs project, Debian project (a free software project), and the Org-Mode project (a free software project). He liked sharing his ideas with fellow community members. For example, Levy exchanged 180 emails about technical issues with the founder of the Org-mode project within the first week after he joined this project community. This is an intense dialogue process in which Levy shared wisdom with fellow programmers. Levy commented on his dialogue-sharing experience in the FOSS community as follows:

Knowing there where happy users out there using software I wrote made me smile for the next 3 months.

Helping each other is not a must, but makes life so much easier and so much more fun. And it’s something people . . . in this modern world can afford. . . . Helping makes life so much more fun. What is a fulfilling life? Not just having enough money.
Levy definitely enjoyed the dialogue-like, sharing-helping-based creative process of the FOSS community, showing his enjoyment and happiness by his frequent use of the symbol of “:)” (a symbol of a smiling face in the context of Internet) in his emails. This creative process has a special meaning to his existential state. In our interview, he told me: "Since some years now, I'm becoming more and more dissatisfied about the city I live in and the sort of people living there. In Hannover, it is possible to ask for the time without getting a reaction at all. The Org-mode community is about the opposite." For him, some part of his "concrete life" (quoted from Levy) in Hannover, a modern commercial city, is estranged from real people and thereby dissatisfying. In contrast, by engaging in the creative process of the Org-Mode community or his "virtual life" (quoted from Levy), he is closely connected with fellow modern individuals whom he called the "real people" (quoted from Levy) and thereby makes him feel delighted. For Levy, his creative life in the world of the Internet gives him an opportunity to be what he wants to be (e.g., being connected with fellow human beings) and to do what he wants to do (e.g., sharing and helping)—he lives more authentically in this technology-supported world due to his engagement in the creative process of the FOSS community.

From the above analysis, we can see that, for FOSS programmers, their community is a new paradise where they spontaneously express their inner imagination, delighted in fulfilling their inspirations and (day)dreams, blissfully sharing and helping fellow community members, freely studying source code of FOSS programs and thereby achieving self-growth (i.e., learning new skills), self-expression (i.e., displaying their skills), and self-verification (i.e., verifying one’s identity). For FOS community members, the process of creating FOSS is like a journey back to their spiritual home where they re-
merge with the outside and inside natural worlds, freed from the calculative rationality-dominated modern society. Songbai’s words might summarize FOSS programmers’ feelings: “During your formal work, you consider more about salary and other material well-being. But working on free software is a kind of spiritual pursuit, spiritual enjoyment.”

For Berman (1972, 1988), modern individuals’ creativity as a process of self-expression is innately intertwined with values shared by a community. In the context of the FOSS community, its creative process is not an exception. The concept of FOSS is a result of FOSS programmers’ struggle against proprietary software companies and the current copyright laws that constrain FOSS programmers’ unique creative activities (i.e., the press element of creativity); in addition, many FOSS programmers talked about their values related to their creative process and they actively promote these values to fight against proprietary software companies, which utilize copyright laws to impose constraints on FOSS programmers’ creative abilities. Thus, it is necessary for us to explore the possible values underlying the creative process of the FOSS community.

5.1.3 The Value of Freedom

Qingyun is a twenty-nine year old editor of a big Internet network company in China and a member of the Zeuux community. He told me that he did not write complex programs but he often provided some simple free programs to his colleagues. He and some other members of the Zeuux community co-wrote a book on Python (a programming language used by FOSS programmers) and then donated the royalties to the
community. In our interview, he said the essences of FS and OSS were different. When I asked him about the essence of free software, he answered:

_Qingyun:_ I always think, freedom, freedom, freedom. The perfect situation is that freedom should be complete freedom. . . . free software is driven by human nature and ethics. Human nature and commerce are two different things.

_Interviewer:_ You mentioned that free software is connected with human nature and ethics. Would you please elaborate on the relationship between free software and human nature?

_Qingyun:_ Regarding this, we need to talk about Richard Stallman’s 4 dimensions of freedom. First, you are able to run software for your own use. The software should be free. Second, you are able to study how the software works. And you are able to apply the result of your study to your own products or program. Third, you are able to redistribute the source code of software and let more people know it. The fourth freedom is that you are able to modify software and share the modified software with people around you like your friends. However, in the case of proprietary software, you are not allowed to run software freely. First, many proprietary programs require that you can use them for personal use free of charge but you will be charged if you use them for commercial aims. In this way, proprietary programs put a limit on our freedom. Second, source codes of proprietary programs are encrypted. It is hard for users to read. So, you have no freedom to study how the programs work. For example, I find one program’s algorithm is very good and is very efficient. May I study it? No. Because it is proprietary. The freedom to study it is deprived. Third, for example, one colleague in my neighboring office does not have an operating system. If I let him to install my windows XP, this is an illegal act. So, I have no freedom to share with people around me. The last freedom, for example, if I feel that one aspect of Windows XP is not good, I cannot improve it because I don’t have the freedom to enhance it. As a user, I, as a living being, can only be controlled by Windows XP. We have to ask ourselves, is a human being using a computer or a computer is using a human being? This is a kind of inequality. I believe that the normal life is put upside down because I pay the money but I do not get what I want and I am limited by various rules. This is very bad. From the perspective of human nature, it is evil. It is an antinomy. I pay for the programs but I cannot enjoy what I want and I have to accept something I don’t need. This is unreasonable. Free software provides a solution. Although its function might not be as good as proprietary software . . . In a community, if a demand is big enough, naturally, some people will develop a program to satisfy this demand; and many people will benefit from it. I feel that, I wonder if you believe in a religion. I feel that, for people who
believe in religions, it is kind of a value of enjoying helping others. And this is done selflessly. In the case of proprietary software, when it is developed, it is driven by some aims. As human beings are born with sin, proprietary software has sin, too. It is commerce-driven. From the perspective of religion, even it is not expressed explicitly, it has selfish aims. In the case of free software, I cannot guarantee that all these free software developers do not have any selfish aims, but, according to what they do, the terms regarding open source code in their licenses, I can say these selfish aims are not significant compared with their significant contributions of their wisdom and labor, which benefit the whole community.

First of all, Qingyun’s comments indicate that the FOSS community strongly holds the value of freedom. For the FOSS community, freedom means that all users of any software are free from the constraints imposed by profit-driven proprietary software companies (e.g., restricting license terms protected by the current copyright laws, encrypted source code) to freely run, study, redistribute, and change and improve the software. These freedoms allow all people including FOSS programmers to do what they wish to do, to learn new domain knowledge (i.e., new programming knowledge) that will enhance FOSS programmers’ creativity (Csíkszentmihályi 1988), to share and help, and to create at their own will. It is with these freedoms that, in the FOSS community, “if a demand is big enough, . . . some people will [co-]develop a program to satisfy this demand,” by freely sharing ideas with each other and building on each other’s ideas in their co-creative process, the two critical activities that help the FOSS community to create technologically excellent FOSS (Hemetsberger and Reinhardt 2006; Kozinets et al. 2008). For Qingyun, these freedoms challenge the current power structure of the software marketplace. Particularly, for FOSS programmers, profit-driven proprietary software companies unethically use specific encrypted code to impose unnecessary functions upon users, to prevent users from deleting unnecessary functions, improving some functions,
and adding new functions, and to prevent users from copying the software. These practices of proprietary software companies lead to a paradox—users as human beings are controlled by machines and technology, a paradox that was forcefully attacked by Romantics and still irritates numerous modern individuals (Berman 1972, 1988; Löwy and Sayre 2001).

By creating and promoting free software in the world, free software programmers believe that they help human beings to return to their original natural state—they, as living beings with powerful creative capacity and free will, are above machines that physically embody and culturally symbolize cold, calculative rationality. So, for free software programmers, the process of creating free software, which is freedom-oriented or guided by the value of freedom, is (1) a political process of liberating users by pulling down the power hierarchy between proprietary software companies and users, (2) an ethical process of restoring human beings’ right to develop/display/actualize their creativity, and to share/help, and (3) a cultural process of realizing the Romantic ideal that emphasizes the primacy of the natural world—that human beings must be above machines.

By criticizing proprietary software (a form of technology) as unreasonably and unethically limiting users’ freedom, and instead promoting free software (also a form of technology) as an ethical liberator, Qingyun implicitly challenges the Gnostic assumption that technology is a divine tool and the Romantic assumption that technology is inherently a destroyer of a humane way of life (Thompson 2004; Kozinets 2008). For Qingyun, the value system of the creator of a technology (e.g., the value of freedom vs. the value of calculative rationality) determines the place of technology (e.g., software) in
society. Whereas profit-oriented proprietary software companies produce constraining and unreasonable technology (i.e., proprietary software, the antinomy of human nature), freedom-oriented FS programmers create liberating technology, which help people to return to human nature as Songbai also attests. So, technology’s contribution to one’s path back to the natural world and human fulfillment depends on the value system of the creator of the technology. The value of “freedom” is one key to unlocking technology’s creative potential.

Freedom has another implication for FOSS programmers: Without the freedom to do what they want to do, the fountain of their creativity will dry up. This typical Romantic argument of creativity is illustrated in the following quotation from Mike, a programmer of the Gentoo project community:

_Interviewer:_ I wonder if the FOSS community is a different kind of world or life for you.

_Mike:_ Oh, it depends. Let me think. About one year ago, I was debugging a very stupid java application. And I was very frustrated. It was a very horrible work. The only thing that kept me going was working on the gentoo things in the evening. That was the only creative thing, the only thing that I thought what I did has impact. I mean it is a stupid Java application used by twelve students. Who cared about it? It had no value for me. But the KDE package used by thousands of users, that was for me more important. The stupid thing is that you got paid for one not for the other.

_Interviewer:_ The Java task was for your job. Is that right?

_Mike:_ Yes. I was working at a university and it was an application. It was really, really horrible. It had bad code. It was quite frustrating. But I had a gentoo thing aside. I got a lot of positive feedback from users, saying “Hey, this works. It is nice.” That meant big differences for me. Because the work is a kind of abstract, you don’t have any feedback, you just do the stuff, or you can do more stuff, there is no personal involvement. A good job will help you to involve in and work with
it. In the worse case, you are doing the stuff because you are paid for it. In an open source project, if you feel you don’t like to do it, oh, don’t. You can just contribute as much as you have motivation. You can fix the issues you want. It is less stressful and annoying because you know you can just stop.

*Interviewer:* Regarding the free software, in the free software community, for example, in the gentoo community, there is no hierarchy structure. You can work on what you want. You can put aside or stop whatever you don’t like. It is a kind of freedom. How do you think about this kind of freedom in the gentoo community? Do you think it is important for you? And in what way?

*Mike:* I think it is important for the motivation and for the feeling that I have created something. Because I can just randomly find some packages on the internet, and I think, “Hey, it will be great to have a gentoo for it.” Then I can work on it. I can test it. When it is done, I have created something, and something that is completely within my control. I think that is very important. It allows you to express yourself.

For Mike, “in a company environment, you have a boss authority;” → you will always have something to do; and you have to do it” (quoted from Mike) even though it is a “stupid” task in which you have no personal involvement. One reason is that programmers are constrained by the fact that they need to get paid by the company. For him, “working on the gentoo things in the evening” is “the only creative thing.” This is because “in an open source community . . . there is no force, no coercion” (quoted from Mike), he can do whatever he wants and things are within his control. The freedom of self-determination allows him to express his sense of self. This quotation of Mike clearly illustrates that freedom is a precondition for creativity and self-expression in the minds of FOSS programmers. Authority based on monetary incentives just constrains creativity because while creativity is a free self-expressive process, externally imposed tasks constrain personal involvement. For FOSS programmers, it is only when all individuals are able to freely express themselves that they could truly and wholeheartedly discharge
their creativity and create a "libre planet," as all trees, flowers, grass, birds, and rivers are free to express own unique beauty in a primitive forest of savage harmony.

Just as Rousseau’s imagination of a free society where human beings would live in their natural state as free agents had inspired French people to break down the Bastille (Berman 1972), Stallman’s imagination of a new paradise of freedom in cyberspace also inspires tens of thousands of programmers around of the world to co-create FOSS and thereby shake the current power structure of the software marketplace. The value of freedom motivates FOSS programmers to engage in their unique creative process, which in turn expands the market share of their creative product—FOSS (Bagozzi and Dholakia 2006), changing the distribution state of economic power in the global software market.

### 5.1.4 The Value of Public Interests

Qingyun’s argument that free software programmers’ contributions of their wisdom and labor “benefit the whole community” suggests the value of public interest of the FOSS community. Drawing on Arnould and Thompson (2005), we might tentatively define the value of public interest as a system of beliefs that promote certain common interests which channel and reproduce FOSS programmers’ thoughts and actions to defend these common interests. This value is illustrated in Yuanbo’s story about his early programming experience and his experience of co-creating a specific Linux program with fellow programmers.

Yuanbo, a famous figure in China’s FOSS community, is about forty years old. He is the Chief Scientist of an IT company located in California and the founder of a popular global Linux project whose members come from all continents. He firmly
believes that, “the developers of open source software do not seek economic reward” and “the programs they develop display their values” (quoted from Yuanbo). Considering one’s treasured values are part of one’s sense of self (Taylor 1989), we can say that, for Yuanbo, the programs he worked on are part of his extended-self. He is seriously concerned with how an individual leaves a lasting legacy to the world. For him, creating something is a way to extend one’s life by leaving something to future generations.

When I interviewed him, he worked in his company’s office in Beijing. He shared the following story at the start of our interview:

*Yuanbo*: Hahaha, I had also developed programs at my university [in early 1990s]. For example, upon graduation from my undergraduate program, I developed a knowledge database system program using the Solaris system. I felt that the program was quite good. During the process, I thought I had applied many good ideas to this program. When I worked on my master degree thesis, I developed a database with C++ language for a client. I also thought I had applied many unique ideas into this program. In 1995, I have read something about the idea of open source. I told my supervisor that I wanted to open the source code of my program.

*Interviewer*: How did you think about opening your source code at that time?

*Yuanbo*: Because in 1995, I had heard of the concept of open source. At that time, I just began my master program. In the early 1997, I nearly graduated from my master program, I had known something about open source. I felt that the code I wrote was quite good so that I wanted to open my source code. But finally, my supervisor prevented me from doing this.

*Interviewer*: So, you didn’t open your source code.

*Yuanbo*: No, as a result, I didn’t open my source code. I put my program in the document cabinet. Years later, the program was wasted. I myself nearly forgot about it and no one else continued to improve it.

*Interviewer*: It’s a pity. So, after graduation, when your load balancing program was used by an Australian user, you should be very happy.
Yuanbo: Yes. The program I mentioned just now was not related to my official project at my university. So, I do whatever with it as I want to.

Interviewer: That is to say, you can determine by yourself.

Yuanbo: Yes, yes. At the beginning, the program was comparatively small. I finished it within about 2 or 3 weeks. Its functions were also comparatively simple. After it was put on the internet, some users use it and I also get feedback. I wrote it in China and some people in other places in the world use it. It really makes me happy. Later, users proposed some new needs and improvement. I am also glad to continue my work on this project. Later I generated more methods to achieve load balance. . . . The second point is to leave something to the world. This is also a kind of feeling. Because your program is a product of your wisdom, and you share it with other people, in terms of virtual asset, you are providing something to the world. Many people can work with your program.

Interviewer: Share wisdom?

Yuanbo: Yes. Share wisdom. Hahaha. Because this is a kind of unreserved sharing, if you put your source code on the Internet, other people can know your ideas and do not need to remake a wheel. If they have better ideas, they can improve your ideas based on your ideas. They don’t need to waste time. They don’t need to recreate a wheel. Many commercial software firms are doing the same thing programs. If we see this situation from a global perspective, we will see this as resource waste.

Following the proprietary software practice, Yuanbo’s supervisor prevented him from opening the source code of his program, which had integrated many good ideas” and “many unique ideas.” This program, together with his ideas or wisdom and values, was put into a document case,” was wasted,” and would never enter the cultural domain, as referred to by Csíkszentmihályi (1988). As a result, he himself nearly forgot about it and no one else continued to improve it;” that is, he lost an opportunity to share and co-improve his program with fellow programmers due to his supervisor who followed the proprietary software practice that embodies the “economic interest”-driven proprietary software philosophy. From the words he used in the above quotation, we can
imagine his feeling about this early experience that his creativity was impeded, a part of his sense of self was lost, and that he lost an opportunity to unreservedly contribute to the common interests of the FOSS community. Yuanbo’s disapproving tone and deep regret about this early experience attest how, as Romantics argued, the cold, calculative rationality and instrumentalism of modernity push modern individuals to judge their success based on individualized achievement while ignoring public interests as well as public affairs (Löwy and Sayre 2001).

In a stark contrast, after he launched his project and shared the source code with other people around the world through the Internet, he continuously received and integrated others’ creative ideas into his project and he also — generated more methods” or became more creative. He felt happy and fulfilled because he and many other people unreservedly shared their wisdom with each other, continuously sparked each others’ wisdom, and collectively provided something to the world. For him as well as many other FOSS programmers I interviewed, the creative process based on global sharing and helping contributes to the wisdom of human beings as a whole. They create not only for their own fun but also for all human beings. In his online paper “15 Years of Free Software,” Stallman (1999) explicitly expresses this ultimate goal and proudly proclaims the achievement of the free software community, “All [free software developers] together have helped to liberate the potential of the computer network for all humanity.”

The practice of opening the source code of one’s programs to the public allows all individuals to enjoy the freedom developed by Stallman and expressed by Qingyun, gives all individuals equal opportunity to create their own programs, to solve their own problems, to fully develop, express, and realize their selves, and thereby enhance all
individuals’ well-being. More importantly, this practice expands the range and enhances the quality of the collective pool of creative ideas (i.e., their shared cultural domain) of a community, and all human society. This is because, with freedom, people have an opportunity to create more ideas, build on each other’s ideas, and thereby collectively contribute more and better ideas to their cultural domain. Here, in the open creative process of the FOSS community, individual creativity and creativity of a community/society and all human beings organically merge, where individual and common well-being become integrated. This merger and integration are what Romantics desired—free, fully developed and displayed imagination of all individuals, contributing to the warm, brotherhood-based social bonds among all individuals, which human beings had enjoyed in a premodern era when cold, calculative rationality had not been so rampant as it had become by the second half of nineteenth century (Löwy and Sayre 2001).

It is because of the merger of individual creativity and creativity of a community and the integration of individual and common well-being that Arthur (a 21-yrs. old programmer of the Wine program project and a university student who studies economics and politics in UK) sees FOSS as a classic public good:

A good is a public good if it meets two criteria, non-rival and non-exclusive. A non-rival good is a good that one person using does not prohibit a second person from using. . .

Non-exclusivity means you can’t prevent someone from using it.

. . .

Now, if you take that and apply it to FOSS, you'll realize, it's a classic public good (public goods are actually a pretty rare occurrence). If I use Wine/Linux/whatever, it doesn't stop you from
using it. And I can't stop anyone from using them, the source is public, along with the compiler/dependencies.

5.1.5 The Value of Egalitarianism

The equal opportunity granted by FOSS to all people alludes to the value of egalitarianism promoted in the public discourses of FOSS programmers. Egalitarianism in the context of the FOSS community is the set of beliefs that all FOSS community members enjoy equal rights in the community's decision-making process. The value of egalitarianism is best illustrated by the famous metaphor of a bazaar created by Eric Raymond (2000b):

I . . . believed there was a certain critical complexity above which a more centralized, a priori approach was required. I believed that the most important software . . . needed to be built like cathedrals, carefully crafted by individual wizards or small bands of mages working in splendid isolation, with no beta to be released before its time.

Linus Torvalds's style of development—release early and often, delegate everything you can, be open to the point of promiscuity—came as a surprise. No quiet, reverent cathedral-building here—rather, the Linux community seemed to resemble a great babbling bazaar of differing agendas and approaches (aptly symbolized by the Linux archive sites, who'd take submissions from anyone) out of which a coherent and stable system could seemingly emerge only by a succession of miracles.

(Source: http://www.catb.org/~esr/writings/cathedral-bazaar/cathedral-bazaar/)

Raymond promoted the creative process of the Linux community as an ideal model for the FOSS community. In the above quotation, he described the creative process
of a traditional software development model as a centrally controlled process of building cathedrals, in which some authoritative and isolated experts carefully craft designs and plans and exclusively control the whole development process. In this creative process, there is a top-down power hierarchy governing involved programmers. Differently, the creative process of Linux community is a process in which numerous people wander and talk with peers with "differing agendas and approaches" in "a great babbling bazaar." As anyone can enter into an open bazaar, anyone can join the Linux project. As anyone can choose to buy whatever he or she wants to buy in a bazaar, anyone can choose whatever tasks to work on as he or she likes because there is no imposed-upon job assignment in the Linux community. As anyone can leave a bazaar and stop talking with any other participants at any time, anyone can stop his or her work at any time because there is no deadline in the Linux community. As anyone can bargain with any other participants as he or she likes in a bazaar, anyone can express his or her own ideas or comments on anyone else's code and write code in his or her own way (which is also subject to a review by peers). In this creative process, no one's agenda or approach is born to be superior to any others'. The decision on which lines of contributed code are dropped off or accepted by a specific project community is a result of a dynamic, open, democratic, collective consensus building process driven by hundreds and thousands of programmers. It is argued that, through their ongoing anarchic interactions, Linux programmers as well as all FOSS programmers, are equal peers, friends and comrades (Stallman 1983), co-creating the miracle of GNU/Linux operating system.

In this idealized picture of the Linux community, an "evolving creative anarchy" (quoted from the same online article, Raymond 1998a), there is no power hierarchy but
equal peers who have equal rights in the decision-making process of the community, where participants can freely express their unique and creative ideas. And, it is because of this decentralized, egalitarian nature of the creative process that the GNU/Linux operating system beats the Microsoft’s Windows operating system (the archetypical proprietary software) in terms of technological performance. This ideal creative process has attracted many other programmers to the FOSS community.

This value is also echoed in the case of Arthur. He told me that “I was amazed that it [Mozilla Firefox] wasn't well known, and the more I found out about it, being open source and community developed, intrigued me.” When I asked “In what way is being open source and community developed intriguing to you?” he answered:

Before I had heard of open source development, the only organizational model I was familiar with was doing everything behind closed doors. Whether it be a business, a club, or software, those outside of the organization weren't allowed in, nor to participate. With open source, however, even if I didn't contribute code to the project, just by using it, I could have a say.

As a programmer, it gives me a say in how the code is written, what the project does, and how it works. As a user, it gives me a say in what the software can eventually do (feature wise). As an individual in society, it gives the rest of society better software to use, freely :-).

In other social spaces, he was excluded from the decision-making process, was not allowed to determine how a project goes even if this project (e.g., a program project) might be critical to his own life, and therefore he was not able to contribute better ideas to
society. But in the FOSS community, he has the equal right to influence the creative process of his community’s project and thereby contribute better creative products to society. Raymond’s (2000b) ideal and Arthur’s testament of the creative process of the FOSS community, where every individual member could have his or her own unique agenda and approach and equal rights to express his or her own creative ideas and judgments regarding the directions of their common community, are consistent with Rousseau’s Romantic ideal of human society (Berman 1972): equal as well as imaginative individuals living within a dynamic community and co-creating a better future for all.

As expressed here, the values of freedom, public interests, and egalitarianism, which are closely related to Romanticism, underlie the creative process of the FOSS community. These three ideologies are closely intertwined with each other. Enjoying equal rights to the four dimensions of freedom and participating in the decision-making process of a consumer community helps every community member to generate and contribute more and better creative ideas to a specific cultural domain of the consumer community and the larger society and thereby enhance the well-being of every individual member, the community, and society at large. In addition, the freely and equally accessible enhanced cultural domain (in terms of both range and quality) could help individual community members to better learn new knowledge and skills and to better develop their individual creative capacity.
5.1.6 Summary of Theme One

FOSS programmers hold a Romantic perspective of creativity. They perceive that they are recreating a new paradise in cyberspace full of enjoyment and spiritual tranquility. In this new paradise, they mysteriously integrate with the natural world, are blithely enabled to express certain basic human natural impulses, and freely, collaboratively, and equally engage in a unique creative process, co-creating their common product—FOSS.

FOSS programmers believe that the right set-up of their community (which is pillared by values of freedom, public interests, and egalitarianism) allows them to develop their creative ideas in modern society where creativity is usually strangled by instrumental rationality as well as commercial pursuits. In addition, beyond individual creativity, they also believe that by sharing their individual wisdom or merging their individual insights, they, as a collective of free and equal agents, can co-create an expanding collective pool of creativity with more fruitful creative ideas. It is in this unbridled, voluntary, unselfish, egalitarian co-creating process that contemporary individuals like FOSS programmers regain their freedom of self-expression, self-enhancement, and self-actualization, return to the mysterious, imaginatively fecund natural world, return to the warmth of human nature, and magically stimulate their previously suppressed inner creativity. That is, creativity is a mysterious, reenchanting, passionate journey back to our spiritual home. Technology plays an important, potentially positive role in this journey but only if the values of the creator of the technology are pure.
5.2 Theme Two: Troubles in Paradise

Theme One suggests that, in their dominant public discourses, FOSS programmers describe their community as an idealized, harmonious, Romantic paradise recreated in cyberspace, or the modern New Continent, where programmers can return to the natural world and human nature. It is a pastoral paradise of enjoyment. By engaging in their creative process, these programmers perceive that they are returning home. FOSS programmers publicly promote and are motivated by the ideologies of freedom, public interests, and egalitarianism. In addition, FOSS programmers perceive that, in this new paradise, they can freely share with and are ready to help each other, freely express their creative ideas and passions, freely and equally participate in decision-making processes, and freely and devotedly contribute to and safeguard public interests of their community and the larger society. This is a pastoral picture of their perceived creative anarchic utopia and their creative process.

This might be an idealized picture. My discussions with informants and analysis of downloaded postings of the FOSS community demonstrate that, in the shadows of this pastoral picture, there exist multiple paradoxes, conflicts and troubles, some of which are more salient than others but all of which are interwoven with those more proclaimed anarchic utopian themes. In this section, I aim to shed more light on these subtle shadows usually ignored in current studies on consumer creativity in the context of consumer communities, enriching our understanding of consumer creativity and co-creation.
5.2.1 Paradise Paralyzed by Sexism

Whereas many FOSS programmers like Stallman are enthusiastically committed to recreating the lost paradise in today’s world, female programmers angrily and bravely poke at the myth of both the old and new paradises. While joining their male colleagues’ effort to create FOSS, these women firmly refute the sexism that existed in that old paradise and which still exists in the new paradise currently being constructed. To fight against sexism in the FOSS community and in the larger society, women programmers establish their own communities within the FOSS community (e.g., Debian Women within the Debian community, LinuxChix within the Linux community). For female programmers as well as those reflective male programmers who support the cause against sexism, the FOSS community is an epitome of larger society where sexism has restricted women for centuries by preventing women from having access to necessary knowledge and skills to engage in certain creative activities and by devaluing, deriding and attacking women who dare to engage in these creative activities. According to a woman Debian programmer (who has been granted the title of Debian Developer, a title that is only granted to a skilled programmer who has substantively contributed to the Debian community), sexism “is an ideology that assumes a hierarchy of human worth based on the social construction of gender difference. Sexism was developed to claim superiority of men over women, based on the idea that ‘natural’ gender norms are a fixed and immutable reality;” “sexism and patriarchy mutually reinforce one another” (available at: http://lists.debian.org/debian-devel/2008/11/msg00504.html).

Thanks to John’s (a 17-yrs.-old programmer and high school student in UK) help, I realized the existence of sexism in the FOSS community. He gave me a web link of an
article about a sexist posting in the Debian community

(http://www.itwire.com/content/view/22320/1090/). I read this article and then tracked the original posting and the following debates on this posting. The posting is cited here:

SmellyWerewolf.com are kindly offering every Debian Developer a discount on their whole perfumes and make-up catalog[1]. If you apply under the procedure outlined below, you will pay according to "Rate Eeencredible", which at the time of this writing means 20% more chicks loving you!

Steps to follow:
- If you do not already own perfume bottle, buy one at your nearest convenience store.

- If you are goth, transsexual, female or simply metrosexual, you also need to buy make-up at the same place.

- Send your private Debian GPG Key to more-chicks@debian.org. Include the brand of your perfume and the color of the make-up.

[. . . . . .]

If you don’t want the chicks, you should still buy the perfume and the make-up, cause you know, that can’t hurt, and in this time of economic crisis, the Lust industry needs your help.

[. . . . . .]
Smelly Werewolf is devoted to giving everyone enough blood for their needs, whether it is by allowing you to hide your corpse smell in birthday parties or by leading chicks directly to your home. In short, we enable people to claim new sex slaves for a very personal experience of professional quality. . . .

--

bye, the Committee for sexy developers
A chick is a member of a female-oriented programmer organization. For example, some female programmers build their own global female-oriented Linux community –LinuxChix” (but male programmers are welcome to join this community) and a member of this community is called a –Linux Chick” regardless of the gender of the member. The quoted poster clearly reduced female Debian programmers to the state of sexual objects like –sex slaves” that can be easily manipulated and seduced at the will of male programmers (who could lead chicks directly to their home with cheap perfume and make-up if they want chicks). His posting stimulated one of the most heated debates on sexism in the FOSS community. A female programmer Valora (pseudonym) stood up and criticized the poster in the poster’s blog site. She pointed out that, the worst thing is not the posting itself, but that the poster had a bunch of fellow programmers who held the same opinion toward female programmers. In response to the poster, she wrote: –I’m very pissed off, not exactly because of your childish joke, but because of the _I prefer to just laugh at them with the help of some fellow developers_ [quotation of the male poster’s words] part” (http://np237.livejournal.com/20741.html?thread=101381#t101381). Her comment suggests that gender bias is not a rare case of a specific pathetic male programmer but is widely held among many male programmers. To be fair, many other male programmers expressed their anger toward the poster and his supporters. In the end of this case, the poster was driven out of the Debian community.

But sexism is still haunting the perceived pastoral, mythological paradise. According to female programmers and some male programmers, sexism is still rampant as it is in the larger society. In 2009, another famous debate on sexism in the FOSS community was ignited by David Schlesinger (a member of the GNOME Foundation
Advisory Board; GNOME is a famous FS project) and Carla Schroder (Linux Today managing editor). In his Blog on July 8, 2009, Schlesinger controversially paste his private email exchanges with Richard Stallman. In one of his emails to Stallman, Schlesinger commented on Stallman’s speech at the Gran Canaria Desktop Summit several days earlier and wrote:

The more significant problem was your comments regarding “EMAC virgins”, which you defined as being specifically _women who had never used EMACS”, and for whom being relieved” of this “virginity” was a “holy duty”. My reaction, and the reaction of a large number of members of the audience with whom I’ve spoken was one of great dismay.

Your remarks gave the distinct impression that you view women as being in particular need of technical assistance (presumably by men, since there's apparently no such thing as a _male_ "EMACS virgin"); additionally, women are quite capable of making their own decisions about who might relieve them of whatever sort of “virginity”. I (and many others) viewed these remarks as denigrating and demeaning to women, as well as completely out of place at what is, in essence, a technical conference.


Similarly, Carla Schroder criticized Mark Shuttleworth’s keynote speech at the same Summit in her blog, “Mark Shuttleworth’s Community Has No Women,” because Shuttleworth (a leader of the FS community) repeatedly used the word “guys” to refer to general programmers, who have the ability of “explaining to girls” difficult technological issues (posted at: http://blog.linuxtoday.com/blog/2009/09/mark-shuttlewor-1.html). In the huge number of responses to the two blogs, many female programmers shared their own experiences of being rudely treated in their online and offline interactions with male
programmers and expressed their anger toward sexism. However, many assumingly male programmers like the supporters of the poster of the werewolf posting, in their responses, supported Stallman and Shuttleworth by arguing that the two leaders just made funny jokes and the ability of appreciating jokes is necessary to work in a big program project. But for Schlesinger, Schroder, and their supporters, underlying these jokes is an implicit assumption that women are inferior to men in the creative software domain, an assumption that was explicitly expressed by a male programmer who wrote in response to Schlesinger: “Women are stupids in computers by nature” (posted at: http://opensourceetogo.blogspot.com/2009/07/emailing-richard-stallman.html). Different from the “SmellyWerewolf” poster and the person who shouted “women are stupids in computers by nature” who intentionally offend female programmers and women as a whole, Stallman and Shuttleworth might be unaware of the offensiveness of their words and the underlying assumption about women. But it is that lack of awareness that demonstrates that these community leaders and many other male programmers have internalized sexism, a biased ideology that has been endemic throughout history.

These two debates on sexism in the FOSS community demonstrate a disappointing paradox of this community: the FOSS community, which aims to create a new land of equality on earth that has been corrupted by the proprietary software company-user hierarchy, is reproducing another strangling hierarchy—the male-female hierarchy. Some of the creators of one dimension of equality are intentionally and/or unintentionally obstructing another dimension of equality.

Facing the rampant sexism in the FOSS community, some female programmers did leave this community (Henson 2002). But many female programmers elected to stay
in the community and act against sexism, as the female programmer S responded to the werewolf programmer: “I won’t be leaving the project or anything of the sort, don’t worry. I’m just seeing it with different eyes.” Many women programmer organizations (e.g., Debian Women Project, Ubuntu-Women, LinuxChix, Women and Free Software) have been established to encourage and help more female programmers to engage in the creative FOSS development/using activities. The Debian Women Project is introduced on its web site (http://women.debian.org/about/) as follows:

The Debian Women project was founded in May 2004. We seek to balance and diversify the Debian Project by actively engaging with interested women and encouraging them to become more involved with Debian. We will promote women's involvement in Debian by increasing the visibility of active women, providing mentoring and role models, and creating opportunities for collaboration with new and current members of the Debian Project. We welcome the involvement of all people who are interested in increasing the participation of women in Debian.

This introduction states that the goal of this project is to “balance and diversify the Debian Project,” which is dominated by male programmers. These female Debian programmers and other female programmers are determined to change their marginalized and often belittled status and create a FOSS community of their own. They want to balance the dominating power of male programmers who control the community’s creative process and public discourse channels (usually maintainers are male programmers and male programmers are invited to make public speeches; see Henson 2002). They want to diversify the population of the FOSS community (only 1.5% of open
source contributors were women in 2006; see Robert 2009) so that they could feel more secured in the community rather than feeling threatened and embarrassed by the majority of male programmers (Robert 2009). They want to make valuable contributions that embody their creative ideas and express their sense of self in a more visible way to the public rather than blending in the shadows of male programmers. They want to legitimately and proudly display their intellectual capacity in the assumed male-owned field (i.e., computing field) rather than unfairly being thrown out of the public sphere into some traditionally assumed women’s areas (e.g., cooking, feeding children, see Henson 2002). All these can be achieved only by encouraging, recruiting and developing more female programmers to join in the creative activities of the FOSS community—they can only emancipate and legitimate themselves by creating or developing more lines of excellent code. Otherwise, they will still be ridiculed and laughed at and thereby shut out, forced to leave the community because the FOSS community follows a rule: “Shut up, show . . . the code” (Raymond 1999).

The comments of some male FOSS programmers such as Stallman and Shuttleworth are a reflection of two ideological stereotypes of creative persons in Western culture. In Western culture, scientists and artists are two archetypical images of creative persons, with whom FOSS programmers identify (detailed discussion of the identity issue will be provided in the sub-theme of Building Identity through Co-Creation of Theme Three). These two archetypes are illustrated in many studies on creativity. For example, most of the informants of Csikszentmihalyi (1996) were scientists and artists. However, scientists and artists are usually assumed to be males in Western culture. The
sexism regarding creativity can be traced back to the sexist bias of some influential early rationalists and Romantics, which has influenced histories of science and art.

In the history of Western science, the sexist bias that a scientist is male can be traced back to Francis Bacon who was one founder of modern experimental science. Bacon states: “If there are any men who have the wish and the will not only to cling to and make use of knowledge already discovered, but to penetrate further; to conquer, not an opponent in argument, but Nature herself in action: to seek, in short, not elegant and probable conjectures, but certain and demonstrable knowledge: such men, true sons of learning, I invite to join me, if they will, so that we can pass by the outer halls of Nature, which any number of men have already trodden, to where at length the way into her inner chambers shall be revealed” (Bacon 1994, p. 40). Some scholars have argued that Bacon’s instrumental and sexist metaphor that the natural world is a female for men to explore and to dominate with his reasoning has evolved into a powerful social institution, which systematically excludes many female intellectuals from scientific careers (Fehr 2004), leading to a predominately masculine science. According to Keller who had worked as a female mathematical biophysicist, Bacon’s bias against women contributes to the creation of the popular Western mythology that equals objectivity and reason as male and subjectivity and feeling as female. As a result of this mythology, science as a domain characterized by objectivity and rationality “has been a preserve of men” (Keller 1985, p. 7). The cultural legacy of Bacon is lasting and powerful. In a test conducted in 1987, when asked to draw a scientist 98 percent of the students drew males; by the 1990s, that number declined to 70 percent with 16 percent of the scientists drawn being clearly female (Schiebinger 2008). In the context of the FOSS community, because writing
programs requires programmers to use their scientific knowledge, the sexist bias in the
domain of science partially explains why some male FOSS programmers believe that they are superior over female programmers.

Whereas programming is based on relevant scientific knowledge, FOSS programmers also like to see themselves as artists who create art and beauty on computers (Himanen 2001). This inclination is closely related to the Romantic archetype of a creative person—an imaginative artist who is usually a male. As the sexism regarding creativity is reflected in the history of Western science (Keller 1985), this bias is also reflected in the history of Western art. In the sixteenth-century Italy, women were not allowed to join artists' guild, the only way to systematically study arts (e.g., painting, architecture design) in that time. Two exceptions were that some artists might allow their daughters to join their workshops (e.g., Jacopo Robusti who is better known as Tintoretto and his daughter Marietta Robusti) and noblewomen were allowed to learn simple painting and music skills to be qualified as good wives and mothers (Chadwick 2007). Even in the eighteenth century when female images were popularly represented in paintings and sculptures as embodiment of some lofty ideals (e.g., the Romantic painting of Liberty Leading the People about the French Revolution which promoted the values of freedom, egalitarianism, and fraternity by Eugène Delacroix), women were still rarely admitted to art schools or academies and excluded from life drawing classes and thereby were not sufficiently trained to work in prestigious genres like history paintings. In the nineteenth century, women were still rarely allowed to attend art schools or academies. Underling this art history is the assumption that women are not creative or at least less creative than men.
To illustrate the ideological roots of this lasting sexism in the history of Western art, consider the following quotations of two Romantic thinkers about creativity:

The search for abstract and speculative truths, for principles and axioms in science, from all that tends to wide generalization, is beyond a woman's grasp; their studies should be thoroughly practical. It is their business to apply the principles discovered by men. (Jean-Jacques Rousseau, *Emile*, 1762; cited in The Guerrilla Girls 1998, p. 19)

The man's power is active, progressive and defensive. He is eminently the doer, the creator, the discoverer, the defender. His intellect is for speculation and invention. . . . [Woman's intellect] is not for invention and creation, but for sweet ordering, arrangement, and decision. She sees the qualities of things, their claims, and their places. Her greatest function is Praise: she enters into no contest, but infallibly adjudges the crown of contest. (John Ruskin 1970, p. 135-136; cited in Negus and Pickering 2004, p. 119)

For Rousseau, Ruskin, and their predecessors and descendents, highly creative activities (e.g., scientific and artistic activities) are beyond women's grasp and women are merely sweet observers, appreciators, or enjoyers of the creative products of men—women cannot be creators. These ideas about creativity have great impact on Western people's thoughts about creativity. If women are inferior in creativity, is it necessary for society to allow women to study arts? Sexism, the gender-based ideology, deprives women's rights to gaining necessary cultural capital to develop their creativity. Furthermore, even though some talented women might overcome various barriers to develop their artistic capacity and became excellent artists, their talents would be misattributed, and devalued. Some paintings by Marietta Robusti had been attributed to her father because it was hard for later critics to imagine that she could have painting
skills undistinguishable from her father’s. A founding member of the Royal Academy praised Angelica Kauffman (1741-1807), a famous artist in the Romantic era, in this way: “she conveys with much art the proper relations between the sexes; the dependence of the weaker on the stronger which so much appeals to her male critics’” (Parker and Pollock 1981, p. 9). Léon Legrange, one of the greatest art critics and cultural gatekeepers in the nineteenth century, declaims that men have “male genius” to create “great art” (e.g., “great architectural projects, monumental sculpture, and elevated forms of painting”) while women have “female taste” to “occupy themselves with those types of art they have always preferred, such as pastels, portraits or miniatures” (cited from Parker and Pollock 1981, p. 13). Women have been constrained by sexism, the ideology originated from a lasting patriarchal social structure in which male dominates female. According to this ideology, women are by nature inferior to men in terms of creativity, and any creative products of women are limited by their natural femininity and thereby inferior to those “elected” of men. This Romantic perspective on women’s creativity shows itself in the narratives and actions of the current FOSS community.

We do not lack our heroines who fight against sexism and hierarchy in the world of artists who write a “her-story” of art with their own creative but challenging experiences. Before the French Revolution, successful female artists (e.g., Adélaïde Labille-Guyard 1749-1803) established their own class to teach their less privileged sisters and promoted their pupils to the public—they intentionally acted as role models and mentors to promote the visibility of marginalized female artists and women as a whole. In the nineteenth century, female artists campaigned against their exclusion from life drawing. To prepare for her painting The Horse Fair, Rosa Bonheur (1822-1899)
took the risk to observe horses in the Paris horse market, a public sphere that was assumed to be only for men. She dressed in men’s clothes to disguise her appearance outside the domestic sphere from the patriarchal society. Bonheur’s experience illustrates the adventure-like nature of women who dared to engage in creative careers. Gradually, in the nineteenth century female artists began to publicly attack sexism in their society. Mary Cassatt (1844-1926), a supporter of women’s campaigns for political emancipation, used her paintings to make her critique that the acquisition of femininity by bourgeois women is a social process, not as the essence of their womanliness, ideologically imputed to women as their nature, but a result of their introduction into place in the social order” (cited in Parker and Pollock 1981, p. 41). Underlying the history of Western art as well as the history of science is a “her-story” that women fight for a social space of freedom and equality in order to engage in creativity.

Consistent with sexism regarding creativity in society at large, a bias that arises from the cultural, historical baggage of Romanticism as well as rationalism, the FOSS community is displaying and reproducing women’s struggle for freedom and equality in the artistic world. On the one hand, many community leaders (who are by default male programmers) and male programmers internalize sexism, devalue and laugh at female programmers‘ creativity and hold a condescending attitude toward female programmers. On the other hand, female programmers work hard to recruit and develop more technologically competent female members and to promote the ideology of gender equality in addition to the general egalitarianism ideology of the community. To gain equality, first, female programmers must participate in the game—creating FOSS; second, they must win or at least tie with male programmers in the assumed amicable competition
(Raymond 2000b) for creating more lines of better code for the community. For female programmers, staying in the FOSS community is not just for fun, learning and showing their excellent technological knowledge and programming skills, fighting for freedom constrained by proprietary software companies, and gaining communal reputation. For female programmers, arguably more urgently, they aim to break down the gender hierarchy imposed by their male counterparts in society and reinforced by their male fellow community members who publicly promote the value of egalitarianism—female programmers are creating a new human relationship involved in the creative process of the FOSS community. As female artists in the Romantic era chose to become artists, female FOSS programmers show their courage and confidence to win the fight against sexism by choosing to join and to stay in the FOSS community. As female artists in the Romantic era initiated their own classes for their sisters, female FOSS programmers aim to amplify their own voices and to break down the unfair power relationship between female and male community members by establishing their own organizations within their specific FOSS project communities, recruiting more female programmers, and providing mentorship and role models to new female members. Together, all female artists in the history of art and all female FOSS programmers write their own collective creative life story that crashes the myth that males are superior over females in creative disciplines, whether they are artistic, scientific or technological disciplines (Schiebinger 2008).

Thus, for female programmers, creating FOSS is a path toward collective-liberation from the constraints of a gender hierarchy. For them, FOSS is a social, cultural and political mobilizing and struggling process in which they not only express their own
individual inner passion and creativity, but also express, build, and enhance their collective identity—human beings intellectually and politically equal to male programmers. In this sense, by creating FOSS, female programmers go beyond the goals of becoming technologically excellent programmers, creating excellent programs that could beat proprietary programs, and gaining the right to freedom; these female programmers aim to subvert the ancient but well-established gender hierarchy, which has discouraged and blocked the full development, and actualization of the creativity of one half of the human population.

By poking at the paradise myth of the FOSS community, female FOSS programmers expose a paradox of the community: the coexistence of sexism in a creative community that espouses the value of egalitarianism, which advocates creativity for all human beings (i.e., an aspect of the value of public interests). Inspired by the Romantic perspective of creativity (see Theme One), FOSS community members collaboratively work to build a new land in cyberspace where the ideologies of freedom, equality, and public interests are held. However, for those male programmers who hold sexist beliefs toward creativity, their Romantic paradise is an old paradise like the Garden of Eden where Adam is superior to Eve; for female programmers and those male programmers who hold the ideology of gender equality, they envision a new paradise where Eve is equal to Adam. To extend Theme One, and by borrowing the typology of Löwy and Sayre (2001), one might say that Stallman and his supporters aim to reinstitute their perceived lost, free, egalitarian paradise in the early 1960s, where sexist beliefs toward creativity implicitly existed. In contrast, female programmers and their male supporters
reject the illusion of a pure and simple return to a perceived lost paradise and struggle for a new, more authentic paradise of gender equality in creativity.

5.2.2 Alienation, Exploitation, and Frustration

For Romantics, one type of alienation is being separated from the natural world and one’s organic community. Particularly, for Rousseau, to alienate is to give or sell one’s self; it is permissible to give one’s life to a lofty cause but it is forbidden to sell oneself for monetary interest. Rousseau’s idea of alienation shows his strong disapproval of a calculative rationality that he claims is at the core of modern society. Inheriting Rousseau’s Romantic idea about alienation, Marx ([1844]1964) argues that capitalists who control the production process instrumentally treat workers as profit-making machines, and that workers lose the control of their own creativity and what they could produce or create. Thus, workers’ creativity is constrained and the internal bond between workers (i.e., the creators) and their products (i.e., what is created) is broken. That is, the creative self-expression part of work is lost for workers. However, workers can and will fight against exploitative capitalists to break their own alienated existential state and to build a dynamic, truly free community where all human beings can fully develop their creative potential. This self-liberating process is also a process of power struggle between these workers and calculative capitalists.

Marx’s perspective of alienation, exploitation, and power struggle in modern society, which is grounded in Romantic thinking, is illustrated in the FOSS community. The openoffice.org community is one popular OSS project community, which creates the OpenOffice.org (i.e., OOo or OO.o) suite that competes with Microsoft’s Office Suite in
the marketplace. The OO.o program was derived from StarOffice, which was acquired by Sun Microsystems, Inc. (hereinafter referred as Sun) in 1999. Sun later opened the source code to the public and initiated the OO.o project as an open source project. This project has attracted many external FOSS programmers to participate in its development process. By hiring employees to work on the OO.o project and some other projects like the Java project and sponsoring these projects, Sun has contributed a lot to the FOSS community as respectfully recognized by many FOSS programmers such as Levy. The wide-spread OO.o might be seen as a good example of marketer-consumer co-creation.

The development of OO.o is managed by the staff of StarOffice; and Sun makes it a rule that all external OO.o programmers transfer the copyright of their contributed code to Sun before their code is accepted and integrated into OO.o. In one case, an external programmer, named Kadim, refused to do so because he was afraid that Sun might use its ownership of his code to limit users’ freedom in the future (e.g., developing proprietary software based on his code). As a result, his code was rejected by Sun on the premise that he would not transfer the copyright of his code. Sun asked the project community to rewrite the code for the work he had done without informing him. He “was forced to” (quoted from Kadim) tell other programmers that he had done this work on the web site of the project. Sun even asked him to mentor a student to write new code for the same work. Although the student under his mentor failed to write any new code, his code was still rejected. In one blog, Kadim, who was “confused” (quoted from Kadim) by Sun’s actions, lamented:
If Sun insists on rewriting all the work I've already done just to ensure that they own all the code in OO.o, even though it is legally permissible to integrate my code under a pure LGPL license [the Lesser General Public License, a free software license, available at: http://www.gnu.org/licenses/lgpl.html] as an external component, then perhaps I need to re-think my relationship with the project. Because that would be a clear sign that the goal of this project is no longer to work with community developers (i.e. those who contribute code, not talk) and create a vibrant open-source project where contributors feel they are making a difference, but to take advantage of free labor to further the corporate goal of Sun Microsystems, by protecting vigorously Sun’s total ownership of the code base as well as the development process in their entirety.

But I'd love to be proven wrong. I'd love to be proven that Sun still are willing to work with us, to make OO.o truly a wonderful product as well as a project attractive to prospective code contributors. But there is nothing I, as a single insignificant mere mortal can do to influence the behemoth that is Sun. It’s impossible to make an even slightest change in how the project is run, even after countless hours of coding and more than 10,000 lines of code generation (which I received no compensation for and involved quite a lot of personal sacrifice). In the end, I made no difference at all. Sad, truly sad.

(Posted at http://kohei.us/2007/10/02/history-of-calc-solver/)

This quotation is a craftsman’s denouncement against the rational calculation ethos of modern industrial capitalism, a typical Rousseauian critique on alienation in a capitalist society, as similarly expressed by Marxists. For a craftsman, when he works on his craft, he is instilling his inner passion, imagination, and soul into this craftwork. Only by inputting his inner creativity as well as self into this craftwork and/or even sacrificing extra energy for his work, the craftsman can create a work that is wonderful and attractive for himself and other fellow guild members. There is an inseparable emotional and spiritual bond between the craftsman and the craftwork. Sometimes, a group of craftsmen might work on a common piece of work under the leadership of their master as a workshop; during their co-crafting process, the master nurtures and develops the inner
talents of his pupils and apprentices, and the apprentices take care of each other like brothers—these craftsmen, the master and his apprentices, are of a family. These family members come together for their common love and passion for the beauty of their craft. Although craftsmen's works might be exchanged in the market, according to Romantics, these craftsmen's ultimate goal is not for the exchange value of craftworks that is estimated and represented by monetary value, but for the use value of craftwork—the beauty of his craftwork, the ecstasy experienced by indulging in the creative process, and free expression of one's own imagination, passion, and soul. Meanwhile, their clients are attracted by the beauty of the craftworks and the imagination of the craftsmen rather than the desire to make money on these craftworks.

This Romantic ideal of the craftsperson is also the ideal of FOSS programmers (Raymond 2000b). From Theme One, we can find a match between the ideal of Romantic craftsman and that of FOSS programmers. Here, we can draw on Rodes's (1961) 4 p's model to illustrate this match. The person element of creativity refers to people with specific traits, values and ideologies who are involved in certain creative activities. The process element of creativity refers to the social, cultural, political, and psychological process in which something new and appropriate is produced. The product element of creativity refers to what is produced in the creative process. The press element of creativity refers to the social, cultural, and political environments in which the person engages in the creative process.

Specifically, the person element: the passionate, imaginative, commercial-interest-free, and collaborative FOSS programmers correspond to Romantic craftspeople; and experienced FOSS programmers who take the mentorship role corresponds to the
masters of guilds; and the values of beauty, creativity, imagination, and free expression over commercial interests of the FOSS community correspond to the same values of the craftsmen. The *process* element: the sharing and help-based creative process of the FOSS community corresponds to the collaboration among the master and apprentices; and the free, expressive software development process of an individual FOSS programmer corresponds to the self-expressive crafting process of an individual craftsperson. The *product* element: the artistic and beautiful programs developed by FOSS programmers correspond to the artistic and beautiful craftworks created by craftspeople. The *press* element: the perceived collaborative atmosphere in the FOSS community corresponds to the perceived collaborative atmosphere in the workshop of the master.

However, this Romantic ideal of freedom, public interests, and egalitarianism has been destroyed by aggressive, blatant, and calculative capitalists. Marx’s critique on the bourgeoisie, the collective of capitalists, applies to the current situation of Kadim, too:

It [the bourgeoisie] has drowned out the most heavenly ecstasies of religious fervor, of chivalrous enthusiasm, of philistine sentimentalism, in the icy water of egotistical calculation. It has resolved personal worth into exchange value, and in place of the numberless indefeasible chartered freedoms, has set up that single, unconscionable freedom -- Free Trade. In one word, for exploitation, veiled by religious and political illusions, it has substituted naked, shameless, direct, brutal exploitation.

The bourgeoisie has stripped of its halo every occupation hitherto honored and looked up to with reverent awe. It has converted the physician, the lawyer, the priest, the poet, the man of science, into its paid wage laborers. (Quoted from Marx and Engels 1848, *The Communist Manifesto*)
Sun, a previously assumed benevolent community member that co-creates an open source program with FOSS programmers, is found to be motivated by its calculative corporate goals and puts Kadim in a truly sad situation. In Kadim’s perception, Sun does not truly appreciate the craftsmanship of his code but instead focuses on the potential commercial interests brought by his code, treats him and other external OOo programmers as free capital (i.e., free labor). So, Sun transforms external programmers into inhumane exchange value and aims to control the code contributed by external programmers as well as the whole program development process (i.e., the creative process of the OOo community). In Kadim’s mind, the disillusion has stripped off the halo of the title of OOs programmers who see themselves as free, imaginative craftsmen. Worse than paid internal programmers of Sun, Kadim and other external programmers voluntarily contributed their code to Sun without even a “callous cash payment” (cited from Marx and Engels [1848]1998) because they were attracted by the open source ideal publicly promoted by Sun, which is perceived to be an ideological illusion that veils the naked, shameless, direct, brutal exploitation of external programmers. But in fact, they are merely treated as free labor or free resources for calculative Sun. Instead of feeling free and fulfilled, Kadim felt “forced,” “frustrated” (quoted from Kadim), and finally deluded. Rather than achieving a spiritual tranquility, Kadim was forced into a state of anger. Although he believed his code was technically innovative and effective enough, his code was rejected. Sun, the political but not necessarily technical authoritative member, saw the code as inappropriate not because of technological reasons, but because Kadim didn’t transfer the copyright of his code to Sun. Facing the behemoth-like Sun, Kadim only experienced being a single insignificant
mortal” rather than merging with the larger community as one (Berman 1972; Maslow 1968). He felt powerless “to make an even slightest change in how the project is run” rather than experiencing himself as an empowered co-creator of a community (Berman 1972; Maslow 1968). He felt trivialized because he “make[s] no difference at all” rather than fulfilling his dreams or expressing his inner imagination and passion (Taylor 1994). We can see that, no matter how creative a consumer and some others perceive his/her ideas to be, the power of the authoritative member of the community could crush his or her creativity by preventing his or her ideas from entering into the community’s creative products (e.g., the OO.o program) or the community’s cultural domain (Csikszentmihalyi 1988), leaving him/her in a “truly sad” rumination and trivialized state (Seitz 2003). In essence, the case of Kadim demonstrates that, as Romantics argued, calculative rationality crushes the creativity of human beings. Sun chose to give up Kadim’s code which was technologically excellent in order to protect its total private ownership of OO.o, the ownership that would allow it to develop profitable proprietary software based on the source code of OO.o. A result of Sun’s practice is that Kadim was not allowed to be a free craftsperson in the OO.o community.

Not being able to win his contest against Sun within the OO.o community regulated by Sun, this programmer joined the Go-oo project, which was initiated by another programmer who was unsatisfied with Sun’s constraining and exploitative rule based on its power as the owner and aimed to build “a developer run meritocracy” with “faster code integration,” “freer licensing” and “freer politics” (cited from the online article “Your Office Suite,” available at: http://www.go-oo.org/). In their new community, they “follow the traditional hackers' process of peer code review” (cited from this online
article): they truly recreate the lost (traditional) egalitarian paradise where there was no authoritative member who could prevent any other community member from being a free craftsman, enabling members to freely and equally create art and beauty for their community.

From this manifesto-like online article, we can see that the Go-oo community, the new, more authentic paradise of Go-oo programmers, is a result of a power struggle for freedom to create as well as to achieve technological excellence. In the Go-oo project community, these angry programmers who were powerless in the OO.o project community (a fake paradise where calculative rationality rules) are now authoritative members themselves in their new paradise. Currently, the Go-oo community competes with the OO.o community for human resources and market leadership, whereas the two communities collaborate with each other as members of the larger FOSS community in their fight against Microsoft and the Microsoft Office suite. Thus, the emergence of the go-oo project not only has changed the power relationship between programmers like Kadim who left the OO.o project and Sun but also has led to a more dynamic and complex power relationship between the FOSS community and Microsoft (an enemy of the FOSS community).

5.2.3 Confrontation and Bitterness between Buddies

According to the Romantic narrative, creativity is an enjoyable process and an ideal community is one community in which community members live in harmony. As Theme One illustrates, the public discourses of the FOSS community are dominated by discourses that describe their creative process and their community in a Romantic style.
Ideally, in a FOSS project community, all programmers should harmoniously collaborate with each other to co-create their collective creative product—a piece of specific free program or open source program whereby this co-creating process is enjoyable and fulfilling (Raymond 2000b; Hemetsberger 2002; Hemetsberger and Reinhardt 2006). But, in reality, only the best ideas (which are socially judged and mediated by the gatekeepers of the project) can be accepted and integrated into the program. The FOSS community is a highly competitive meritocracy at least in term of technological excellence. However, it might be difficult for a group of passionate and talented programmers to agree on which lines of code or technological direction is the best in term of technological performance. As a result, some programmers might challenge each other, leading to some emotion-charged debates and quarrels.

Such internal conflict at the community level is illustrated in the thread of “Re: doc patch: "Saving Properties" merge into "Format Conversion"” of the Emacs project, a free software project founded by Richard Stallman in 1976. As the founder of this project, Stallman manages and maintains this project and he often proposes some technical directions for this project. For example, on 2007/05/03, Stallman proposed in one posting to a mailing list of the Emacs project: “We might use the trunk [a technical term; it means the unnamed branch (version) of a file tree under revision control] to make Emacs 22.2.” Two other Emacs programmers argued that Stallman’s proposal had at least one technological disadvantage. S, one of these two disagreeing programmers, commented that Stallman’s proposal was “Soooo completely illogical” and continued:
I'm not usually paranoid, but isn't this just another strong indication of the secret(?) plan to delay -- as much as possible -- not just 22.1, but also every possible future release. [Interviewer's note: Storm's comments]


Programmer S’s words of “Soooo completely illogical,” “paranoid” and “the secret (?) plan” strongly suggest his dissatisfaction with the perceived inefficient way that Stallman manages the community’s program development process (or creative process). Programmer S’s posting started an escalating flamewar (i.e., a bitter online debate with personal attacks among participants). Programmer S even asked Stallman “Why should there be special rules for your changes?” in one of his later postings (on Sat, 05 May 2007 01:05:28 +0200), challenging the legitimacy of Stallman’s way of project management. Stallman denied the existence of any special rules. Joining programmer S, another programmer N questioned Stallman’s goals underlying Stallman’s proposal by saying: “I can only guess that the purpose is to stall development on the trunk. Whatever your goals, I think some of us feel that we are just being used to serve them. You talk of community, but it's not the kind with which I'm familiar” (Posted at: http://lists.gnu.org/archive/html/emacs-devel/2007-05/msg00118.html).

An originally small technological disagreement evolved into angry accusations about the authenticity of Stallman’s publicly claimed community-oriented goals. This blame might be the most serious attack on a project leader because the FOSS community is a highly ideologically motivated community and members voluntarily contribute to a project mainly because they identify with the assumed community-oriented ideologies of the project. But here, some programmers felt that they were taken advantage by Stallman
to serve his hidden personal goals. One reason for this doubt is that these programmers were not satisfied with Stallman’s project management style which was perceived as dominating, illustrating the intertwining relationship among social factors (e.g., the perceived using-being-used relationship between Stallman and some other programmers), political factors (e.g., the maintainer controls the creative process), technological factors (e.g., choice of code, functions, development environments), and psychological factors (e.g., anger, frustration, enjoyment) in the creative process of a consumer community.

Programmer N was seriously concerned about the productivity of their project community’s creative process, which was perceived to have deteriorated due to the leader’s improper management style that led to declined creative activities. After receiving several other negative comments, Stallman responded:

I try to read as little as possible of the messages that vent frustration at me. Even so, they make me angry at the people who sent them. If I focused on them more, I might start to develop a permanent bitterness towards the senders.

I appreciate the help that many of you have given to the development of Emacs, but badgering and bullying is not help. (Posted at: http://lists.gnu.org/archive/html/emacel/2007-s-dev05/msg00165.html)

Stallman became angry. The joy of co-creating with fellow programmers has evolved into a “permanent bitterness toward” the same helpful but sarcastic fellow community members. He was very reserved in this posting but his reserved explanation did not stop this flamewar. Another programmer responded to Stallman and said that Stallman’s “hardheaded” project management style “risks alienating” other programmers
This episode is a typical flamewar in which some angry, frustrated individual community members challenge specific powerful individual community members of a FOSS project community. In the thread of “Re: doc patch: “Saving Properties” merge into “Format Conversion”” from which the above-quotations are taken, most of the postings challenged Stallman’s style of managing the creative process of the Emacs project. From this episode, we can learn that, in the context of a consumer community, (1) many individual members might actively challenge the technological authority of certain individual gatekeepers (e.g., Stallman in this episode) and the perceived “illogical” rules that govern the creative process of their community; (2) such intensive confrontation might cause engaged community members to experience anger, frustration, and even permanent bitterness, and (3) perceived improper control of the community's creative process by certain authoritative, powerful community members might alienate some other community members and thereby lead to a brain drain, which might reduce the productivity of the community's creative process.

So, the creative process of a consumer community could not be free from conflicts because creativity, by its nature, means challenging some established rules and changing something unsatisfying (Berman 1988). Different from the argument of many Romantics such as Coleridge and Wordsworth (McKusick 2005) and the public discourse of leaders
of the FOSS community such as Richard Stallman and Eric Raymond (Williams 2002; Raymond 2000a, 2000b), creativity, a community-based process, at least, cannot always be a pastoral, peaceful, and harmonious process that is full of ecstasy or is just dotted by purely rational discussion. Creativity is a process bound in both ideological and technological conflicts and a process full of frustration. For modern individuals, creativity, a journey toward our spiritual home, is a thorny journey.

On this thorny journey of creativity, the frustration that FOSS programmers might experience is induced not only by a constraining and disrespecting gender hierarchy, the perceived powerful but constraining and exploitative community members, and conflicts regarding creative process management and technological choices, but also by another type of conflict: ideological conflict among fellow community members.

5.2.4 Creativity Infused with Politics

For Romantics, people of an organic community should help and share with each other—they keep genuine social bonds; accordingly, when these people engage in creative activities, they freely and wholeheartedly help each other and share their wisdom with each other. It is through this sharing and helping in their creative process that these people can fully develop their own individual creativity and expand and enhance their collective pool of creativity. Adopting this Romantic perspective about creativity, researchers usually see the creative process of consumer communities (e.g., the FOSS community) as consisting of multiple harmonious, enjoyable, and insight-stimulating help-seeking-help-giving chains (Kozinets et al. 2008). But these magic chains might be
broken because individual community members might hold different views about what is considered “acceptable” work.

In the Emacs community, Owen, Oliver, and Otto work on a project that helps users to use the Emacs program on Microsoft’s Windows operating system. When Owen met a technological problem, he posted a help-seeking posting on the emacs-devel mailing list (the thread title: Re: RMAIL settings [was: Re: w32 does not have emacsclient/server]). Freeman gave Owen helpful ideas and told Owen: “Microsoft is a corporation that endeavors to restrict both your economic freedom and mine” (posted at: http://lists.gnu.org/archive/html/emacs-devel/2005-08/msg00204.html). Oliver responded to Freeman’s posting as follows:

I know the politics of software freedom is on-topic on this list (judging by Richard's posts). But some of us *do* use Windows, MS-DOS, OS X and other non-free operating systems.

Speaking for myself and no one else, I strongly think that getting political answers to technical questions, and in particular political tirades that are not new, that won't change my stance, and which do not add anything new to the debate is absurd. (Posted at: http://lists.gnu.org/archive/html/emacs-devel/2005-08/msg00212.html)

For Oliver who was not a hard core fan of free software and did not reject using non-free software (i.e., software that does not guarantees users' freedom defined by Stallman), Freeman's "psychological counseling-"like posting or "diatribe" was "ridiculous," "absurd," and "insult[ing]" because Freeman blurred the boundary between "political" issues and "technical questions" and "dangerously treads the patronizing
border.” In his later response to Freeman, Oliver explained, “I’m not questioning your ideology, only your chosen method of communication” that linked politics or ideology to seemingly pure technological issues. For Oliver, political or ideological issues should be separated from technological issues at least in communication. After rounds of exchange of response, Freeman explained his disagreement with Owen, Oliver, and Otto:

By providing resources to a government-enforced monopoly that restricts what people I know and what I can do, you hurt me and my friends. I suspect you do not do much hurting and that you try to compensate, but nonetheless, you are hurting me and my friends. That is why I become angry.

For Freeman, the code that Owen, Oliver, and Otto were writing, no matter how technologically innovative, was just providing resource to a government-enforced monopoly that restricts what people” could do. For Freeman, these three programmers indirectly helped Microsoft to expand its market share of Windows and thereby helped Microsoft to restrict” and hurt” more users. Thus, for Freeman, although Owen and his colleagues tried to help other people without asking for any compensation, they were actually hurting” people. Freeman explicitly linked software development to government-enforced monopoly” and the current American copyright law to social and legal inertia,” and further called people to exchange” unethical laws and social customs.” So, for Freeman, the creative process in the domain of software (i.e., software development process), a seemingly pure technological process, is intertwined with politics and ideologies; and people need to create a new ethical legal system and social
customs to protect people ‘ s right to freedom advocated by Stallman. Offended by Freeman ‘ s insistence on combining technological and ideological issues together, Otto responded:

Come on, now. We are here only to help maintain Emacs. If you don ‘ t want my or [Owen ‘ s] help just because we happen to use MS-Windows, or not exactly agree with your particular interpretation of ethics, just say so, and I can assure you won ‘ t hear from me again, ever.

Now, can we please drop this off-topic discussion? I no longer have CPU cycles left in my brain to wade through this endless heap of $0.10 philosophy. I didn ‘ t spend half a century (some of it in quarters where Microsoft-style monopoly would look like the Promised Land) --- I didn ‘ t spend all that time thinking about freedom and its merits, and working towards it, just to find myself staring at all this verbiage that presumes to tell me something new.

_Please_ stop treating me like a teenage who is still not sure how to tell right from wrong.

And PLEASE let us try from now on to invest our energy in goals we all agree to and support, instead of wasting it on looking for areas of disagreement and then beating them to death! Didn ‘ t you learn from your history classes that humanity succeeds whenever we look for cooperation between well-meaning people, and invariably fails where we, in the name of Higher Good, strive for confrontation among them? (Yes, it ‘ s my turn to preach ;-) (Posted at: http://lists.gnu.org/archive/html/emacs-devel/2005-08/msg00291.html)

We can sense the angry, disappointed, and sarcastic tone of Otto from his use of the following terms, sentences, and symbols: “Come on,” “I no longer have CPU cycles left in my brain to wade through this endless heap of $0.10 Philosophy,” “verbatim,” “PLEASE,” and “preach.” For Wayne, always linking politics, ethics, or philosophy [of
free software or proprietary software] to technological questions was "brain[less],"

deconstructive, and intolerable although he agreed with the philosophy of free software.

More interesting, at the start of this posting, he warned Freeman that he would never give
Freeman any help if Freeman disliked them for using free software in the Windows
environment. This is a warning of refusing to help. Six minutes later after Otto’s posting,
Owen wrote in his own posting in response to Freeman: "If I ever ask anything related to
Windows on this list (as I will surely do), I'd really appreciate if either you don't answer
my question, or don't include your politics into it. Consider it as a personal plea.” It is a
different warning—a warning of rejecting help. Owen required Freeman not to give
Owen any help related to Windows or not to "include politics into” Freeman’s
technological answers. In the end of this thread, Freeman did not change his stance: he
still linked politics, ideology, and ethics to software development.

This episode is consistent with the Romantic perspective of creativity. For
Romantics, the creative process is always a process wrought by various conflicts because
a creator challenges any perceived improper beliefs, criteria, standards, rules, norms, and
authorities in his or her creative process. In this episode, Owen, Oliver, and Otto as one
side and Freeman as another side challenge each other’s moral criterion about whether it
is ethical to write code that is open to public and helps users to use free software in a
proprietary operating system environment. All these four programmers define them as
free software programmers but they have different understanding of the relationship
between ideology and technology. Due to this difference, in some situations, community
members might refuse to help and reject help from other members in their creative
process. Some community members believe creativity is innately political or ideological
because their creative process is both influenced by and changing the current government politics, legal system, and social customs. But, some other members believe that in their creative process, they could focus on technological issues only; in essence, they hold a technology-determining ideology about creativity to a certain degree. This ideological conflict among community members might break a benign view of sharing and help in the creative process of a consumer community and lead to negative-emotion-charged social conflicts. This episode suggests that creativity is inherently political because creative individuals challenge any perceived improper authority.

5.2.5 Summary of Theme Two

Different from the findings in Theme One, it is found that the creative process could be rich in paradoxes, conflicts, and agonies. First, there exists sexism in the FOSS community, which is threatening to current and potential female programmers and thereby reduces the creativity potential of the FOSS community as a whole; female programmers engage in the creative process of the FOSS community not for recreating a lost paradise but for creating a new better paradise. Second, when a company sponsors a creative consumer community (e.g., the FOSS community), some community members might leave this community because they might think that the company constrains and exploits their creativity and they might build a new, competing consumer community which is perceived to be a more authentic space of creativity. Third, it is not unusual that common community members challenge authoritative community members’ technological and ideological authority in the community’s creative process. Finally, the creative process of a consumer community is infused with politics. The help-
seeking-helping-giving chain could break when involved community members hold different views on how closely technological and ideological/political issues are connected with each other.

5.3 Theme Three: Dialectically Fusing Rationalism and Romanticism

If they could experience discrimination, anger, alienation, exploitation, sadness, disillusionment, bitterness, and frustration in their community’s creative process, why and how can FOSS programmers still engage in this paradoxical creative process? Theme Three gives us an answer: for FOSS programmers, creativity is a journey toward a moral destiny. But this destiny is not a journey toward a fixed and agreed upon destiny. While hundreds and thousands of individual programmers engage in this common journey, they also continuously debate with each other about where their destiny should be and what actions they should take to reach this destiny. This is a journey of collective exploration. On this journey, morality arises from the interplay between rationalism and Romanticism as well as the cultural, historical baggage that comes from these ideological systems (i.e., sexism). On this journey, FOSS programmers interact with each other and other social actors (e.g., proprietary software companies) in their effort to construct what each one believes is their idealized social space. And, while they may debate along this journey, the journey would not be possible without their interaction with each other. So, although they experience various paradoxes and conflicts on this journey, FOSS programmers still enthusiastically co-create FOSS in collaboration as well as confrontation with fellow community members.
5.3.1 Creativity as a Journey toward a Moral Destiny

Many of the informants of this study initially engaged in the FOSS community’s creative activities for learning new knowledge and skills and other such instrumental reasons. But, gradually, these programmers learn and develop their own understandings of the values of freedom, public interests, and egalitarianism in their interactions with fellow community members, proprietary software companies, and other social actors, and attach increasing importance to building a world where these moral values are actualized.

In 1998 Levy, one of my informants, bought his first personal computer (PC) and the first edition of Windows 98. But Windows 98 didn’t work as he wanted. So, he downloaded and installed whatever free software “as in free beer” (quoted from Levy) he could find on the Internet. Three or four months later his girlfriend gave him a SuSE 5.1 CD [SuSE is a version of Linux operating system] as a birthday gift; and he installed the Linux system on his PC. He found that with Linux it “was all so natural to do” what he wanted to do. But until 2003, he “just consumed free software” and his “will to contribute came into existence by [three] crucial experiences” (quoted from Levy). When he worked for a company as an intern, he had two tasks related to Linux. For the first task which was related to a bug of SuSE, he posted a message asking for help on the Internet and “got help only 7 (!) minutes later” that helped “everything [to] work as expected” (quoted from Levy). This was in sharp contrast to the case of proprietary software, where users have to wait for the release of the newly updated version of the software which might fix the bug. For the second task, “one simple phone call [to the SuSE support] did the trick” and “that solved [his] problem the same day it occurred” (quoted from Levy). He then
talked about the third crucial experience which is actually an abstraction of all his
interactions with FOSS and fellow FOSS programmers:

This not one event - it's a chain of events (or a net). Linux turned out to be a
programming environment, far more flexible than Windows (I never
used a MAC). Also, it's cheaper, I can read the sources. And [I] really
enjoy the freedom I have to change and distribute the software. I even made my
live from free software the last years when I wrote web applications based on free
software . . .

That was how I thought ten years ago. I didn't really think about
it. OK, I started to read some of the comments and papers of Richard
Stallman, Linus Torvalds and so on on the Internet. But by that time,
this was a result of using free software, not the reason for it. The
"crucial experiences" I wrote about further down were the experiences
that opened my eyes and changed my point of view (but those happened a
few years later).

I emphasized the "free beer" point of view, to make up a contrast to the
way I see those things today.

But free beer is not a bad thing either. The free speech part of the
FOSS story is hard to understand. I still learn about that. . . . Moving from "free
beer" to "free speech" is continuous process.

In contrast to his disappointing interaction with proprietary software (e.g.,
Windows 98), his increasing interactions with FOSS and other FOSS programmers (e.g.,
using FOSS, reading about FOSS, co-creating with fellow FOSS programmers) consisted
of many enjoyable life experiences. So, he joined the Emacs community, the Debian
community, and the Org-Mode community. When co-creating with fellow community
members, he gained joy from "work[ing] with people on some facet [they] all are-
feedback from fellow community members, and only committing to making users happy
This expanding net of interactions with FOSS and fellow community members enables him to appreciate the freedom promised by free software and drives him to contribute to the FOSS community and common users. He has been continuously transformed by the creative process of the FOSS community. Several years ago, he emphasized “free beer” or getting access to technologically excellent software free of charge; today, in contrast, he emphasizes “free speech” or freedom defined by Stallman. His comment that “moving from ‘free beer’ to ‘free speech’ is a continuous process” suggests a FOSS programmer’s journey on which the moral values of freedom, public interests, and egalitarianism loom larger and larger, and he or she gradually internalizes these moral values and voluntarily uses these moral values to guide his creative activities in the FOSS community.

But, some nodes of the net of his experiences are not so enjoyable. Levy’s interactions with fellow community members are not conflict-free. Although he did not tell me the details of his conflicts with fellow community members, he told me: “I have a few mails [i.e., some of his postings] out there, I wish I had never written :).” Considering Levy’s interactions with other FOSS programmers, and the conflict between Freeman as one party and Owen, Oliver, and Otto as another party as we discussed in Theme Two, we can see that interactions among individual FOSS community members have at least two effects. First, such interactions socialize individual members into the morality-oriented creative process and the journey toward a moral destiny of the FOSS
community, which can be defined as an idealized social space where specific moral values are actualized. This facilitates collaboration among individual members, and thereby assists individual members in developing their own programming skills (e.g., Songbai joined a Linux group initially for improving his programming skills which would help him to get a good job in the future) and solving technological problems (e.g., a fellow SuSE programmer helped Levy to fix a bug).

Second, such interactions are necessary for individual FOSS community members to actualize their moral values as well as their creative ideas. As Rousseau suggests, all members in a genuine community should equally engage in a communal dialogue to reach some social agreement regarding their common social issues but they will and should have the freedom to keep their individualistic preferences (Berman 1972). Ideally, these members will reach agreements on all issues. But, in fact, they often disagree with each other because it is impossible for all individual members to have the same preferences and moral values and hold to the same preferences or moral values to the same degree at the same time. As a result, community members will always engage in dialogue, which might lead to agreements on some issues; but there is bound to be disagreement on some other issues.

In the context of the FOSS community, individual FOSS programmers engage in dialogues to discuss and shape the moral values that will guide their creative process (i.e., the moral destiny is negotiated in an ongoing way), the technological directions to follow, and the code that will be accepted. Levy acknowledged that one’s contribution is likely to be included in a community’s creative products if it “has an acceptable form and works” (quoted from Levy). Although Levy did not explicitly discuss moral values, his word
"proper" implies that any creative ideas contributed by anyone must be subject to the social judgment of the community according to certain moral values before these ideas are integrated into the creative product of a community or before other community members would support these ideas. For example, within any FOSS project, open source code is the only form of source code that can be accepted.

One critical factor affecting this social judgment process, which is a social interaction process, is that even if all community members share the same moral values, these community members do not necessarily agree on how to interpret these values and/or how to apply these values in their creative process. In the case of Freeman, Owen, Oliver, and Otto, whereas all of them hold the values of freedom, public interests, and egalitarianism and aim to actualize these values by creating FOSS, Freeman disagrees with other programmers on whether the practice of creating free software that could be used on the Windows system is ethical or consistent with these values. One result of this debate and similar debates among other FOSS programmers is that some FOSS programmers like Owen, Oliver, and Otto develop FOSS that could be used in a proprietary operating environment and some other FOSS programmers like Freeman and Stallman stay away from such projects. The debate between Freeman, and Owen, Oliver, and Otto suggests that the moral values of the FOSS community and their meanings are constantly contested (which might be as heavily emotion-charged as what happened between Freeman, and Owen, Oliver, and Otto) and that creativity as a journey toward a moral destiny is inherently conflict-laden. So, in the context of the FOSS community, the moral destiny is intertwined with the creative process; both of them are dynamic and conflict-laden. In addition, such conflicts are an indication of the FOSS community as a
genuine community as Rousseau describes—the FOSS community not only holds common values but also allows dialogues and individualistic distinction (Berman 1972).

5.3.2 United by a Common Threat to Their Moral Values

To better understand the conflict-laden, socially constructed nature of creativity, we should not ignore the impact of FOSS programmers’ interaction with proprietary software companies on their awareness of the importance of freedom and their journey to actualize the values of freedom, public interests, and egalitarianism. In the case of Levy, first, it is some perceived technological shortcomings of proprietary software (e.g., Windows 98 could not work as he expected) that drove Levy to try free software and helped him to be aware of the possibly technological excellence of free software. Second and more importantly, his interaction with proprietary software companies is morally opposite to his interactions with other FOSS programmers. As he wrote in an email, the more people enjoy free software, “the more they will hate to be constricted in their use of hardware and software.” That is, FOSS programmers like him will consciously compare their interactions with proprietary software companies and their interactions with other FOSS programmers. He continued:

Microsoft is running the free-speech part here in Europe :-D in that they tried to sell Medion Laptops that would accept an OEM Vista only. To ensure that, a special chip set was used (this happened in France). It is not sure yet, if Windows7 will be delivered with IE or without (for legal reasons).

For the free-speech aspect of software, users must experience a restriction on the one side, so they feel a reason to react.

In fact, most users seem to think they _own_ the Windows system that
runs their hardware. They also think they _own_ their hardware. I'm confident that Microsoft and Apple will show them the opposite :) 

Fair enough, this opens the door for Android, Linux and other open systems. A good portion of Microsoft’s market share is due to contracts with hardware companies like DELL, Lenovo, Acer... But those contracts will end one day and more and more users will urge DELL, Lenovo and Acer to deliver hardware without an OS or the one they wish.

Users including FOSS programmers rebel against Microsoft and Apple because users experience "a restriction" imposed by these two companies who constrain their users through special technologies. So, although users buy Windows from Microsoft and hardware from Apple, they could not freely use the software and hardware as they want (i.e., copying the software for friends, modifying the software and hardware) and therefore they do not truly own these staff. But rebels rise where a restriction exists. It is this restriction that drives FOSS programmers to start their journey to actualize the values of freedom, public interests, and egalitarianism and to beat proprietary software and proprietary software companies. In addition, proprietary software companies’ propaganda against FOSS and FOSS programmers often push FOSS programmers to generate more public discourse against these companies and their proprietary software. For example, based on the reports written by Microsoft employees which originally attacked FOSS and the FOSS community as morally wrong, Eric Raymond edited these reports by adding his own comments, renaming them –The Halloween Documents” (Raymond 1998b), an influential document in the history of the FOSS community in which he piquantly criticized the moral rottenness of Microsoft (e.g., being purely profit-and-control-driven). In a certain sense, criticizing the enemies’ moral rottenness reinforces FOSS programmers’ belief in the moral correctness of their creative activities (Benford and
Snow 2000; Kozinets and Handelman 2004). So, on the journey toward the moral destiny of an individual FOSS programmer, his or her companions include not only fellow FOSS programmers (i.e., his or her friends, although he or she often quarrels with these friends) but also proprietary software companies (i.e., his or her enemy, although these enemies might provide certain technological and financial support to the FOSS community). It is in these interactions with both friends and enemies that individual FOSS programmers develop, negotiate, and contest the moral values of the FOSS community and the interpretation of these moral values.

For FOSS programmers, creativity is a journey toward a moral destiny. This journey is not smooth, but rocky and thorny. On this journey, individual FOSS community members have to engage in debates with each other because creativity is innately a community-based social judgment process; and some of these debates might evolve into heated, emotion-charged quarrels because of the heterogeneity among community members regarding moral values and interpretation of these values as well as technological preferences. On this journey, individual FOSS community members also, directly and/or indirectly, interact with proprietary software companies to argue for the morally righteousness of FOSS and the FOSS community. Through their interactions with both fellow FOSS programmers and proprietary software companies, individual FOSS programmers formulate their moral values and their own interpretation of these moral values, and imbue their own understanding of their moral values into their contributed ideas. But, whether a project community accepts a contributed idea or lines of code depend on whether the community socially judges the idea or the code as acceptable. These judgments are inevitably intertwined with the moral values of the relevant judgers.
Up to now, we have discussed creativity as a journey toward a moral destiny, reminded that this journey is conflict-laden, at least partially, because individual FOSS community members have different contextualized understanding of the values of freedom, public interests, and egalitarianism. But, it is this common desire to embark on a moral journey that unites this community. To better understand consumer creativity in the context of a consumer community, we still need to explore the ideological and cultural roots of the moral values held by its members. We will discuss this issue in the following sub-theme in the context of the FOSS community.

5.3.3 The Ideological Sources of Morality

Moral values of modern individuals are influenced by the ideologies of rationalism and Romanticism (Taylor 1989). Particularly, for FOSS programmers, morality arises from the interplay between rationalism and Romanticism, and the cultural, historical baggage that comes from these ideological systems (i.e., sexism in creative domains such as art and science).

In my email interview with Mike, the topic of whether programming is an art or science came up. This is an age old question among programmers (Knuth 1974):

Mike: Ah, the old debate. Maybe "craft" would be a good word to describe it? It has elements of science (algorithms, complexity theory and so on) and elements of an art (deciding which of the dozen tools to use, deciding how to structure things)

For example how do you replace a string? Do you write a perl oneliner, do you pipe through sed ( cat foo | sed -e 's/foo/bar/' ) or do you realize that bash can do it too? That is mostly decided by experience and familiarity with the tools.
In some cases it's very non-scientific - some code "smells bad", which means that it is intuitively and aesthetically unpleasant. Usually that turns out to be badly designed or buggy, but this intuitive approach is not quantifiable or reproducible.

Interviewer: What did you mean by the terms of "intuitively unpleasant" and "aesthetically unpleasant"?

Mike: It's hard to describe.

[...] So if you look at code there's a feeling of "eh? that's ... strange!"
And once you dig down you notice that an exception isn't handled, the array size is off by one and the documentation does not reflect what the code does. The initial unconscious (or pre-conscious?) impression tends to be right, but you didn't see the issues directly.

Interviewer: I am very curious about such "intuitive approach."

Mike: The biggest problem with that is that it is hard to describe and hard to reproduce. Very non-scientific :)

Mike believes that programming, their primary creative activity within the FOSS community, combines elements of both science and art. His belief is supported by Arthur, Levy, and Rick. For these four programmers, the elements of science include conducting several rounds of "experiments . . . to test . . . hypotheses" (quoted from Arthur), and learning/applying algorithms, complexity theory, and other "tools, rules and parameters" (quoted from Levy). These elements indicate that FOSS programmers' perspective of creativity is partially consistent with rationalism, which is the belief that creativity is generated by the conscious, deliberating, intelligent, rational mind" (Sawyer 2006, p. 15). By following some objective rules, by conducting experiments with proved efficient tools and known solutions (e.g., known "design patterns," quoted from Levy), and by formulating and testing certain hypotheses about code, a programmer can find optimal solutions to problems and reach his or her well-planned "goal" (quoted from Arthur).
Accordingly, programming could be understood as quite an instrumental, problem-solving process (Moreau and Dahl 2005).

Whereas the belief of Mike, Arthur, Levy, and Rick might just be a rational reflection of their creative activities, their belief also serves a political role. Particularly, by claiming the FOSS development model to be scientific, FOSS programmers fight against Microsoft’s claim that FOSS is technologically worse than proprietary software. For example, when Microsoft claims that the bazaar-like FOSS community lacks the massive management necessary to push towards new frontiers,” Raymond argues that “massive management... is one of the worst... barriers” that retard innovation” and “The Linux community has not merely leapt this hurdle, but utterly demolished it” (cited in the online article “The Halloween Documents,” Raymond 1998b). When Microsoft claims that OSS performs badly in the aspects of ease of use and a friendly user interface (UI) because “OSS doesn’t have an explicit marketing/customer feedback component,” Raymond claims that Microsoft purposely uses “carpet-bom bomb marketing” to delude users into believing that (a) bugs are features, or that (b) all bugs are really the stupid user’s fault, or that (c) all bugs will be abolished if the user bends over for the next upgrade” (cited in the online article, Raymond 1998b). In contrast, Raymond argues that the FOSS community’s approach to the UI issue, separating the engine (which does a specific work) from the UI (which does the viewing and control) is more efficient and effective. When Microsoft claims that, for OSS products, “future features have no organizational commitment to guarantee their development,” Raymond argues that there always are OSS programmers who seek novelty, and create and support new features. For Raymond and other FOSS community members, the FOSS development model is more
scientific than proprietary software development model. By resorting to the logic of efficiency that embodies the ideology of rationalism which is dominant in the domains of science and engineering in modern society (Noble 1992), FOSS programmers could enhance the ideological legitimacy of their unique software development/creating process.

However, programming is not a pure rational process for FOSS programmers. It often involves engaging in divergent activities that generate “unexpected” insights, having an epiphany “ah ha!” (quoted from Arthur) moment, and following one’s intuition and aesthetic feeling. This process could be very non-scientific and unconscious. “Elegant code” (quoted from Arthur) is often intuitively and aesthetically pleasant; and in some cases, elegant code is a result of an unquantifiable and irreproducible creative process. These non-scientific, irreproducible, intuitive, unconscious, and aesthetic elements indicate a Romantic perspective of creativity, which is “the belief that creativity bubbles up from an irrational unconscious” (Sawyer 2006, p. 15), inner spirit, spontaneous inspiration, and artistic imagination. So, FOSS programmers dialectically fuse rationalism and Romanticism in their perception of their own creativity.

It is due to their dialectical fusion of rational and Romantic perspectives of creativity that FOSS programmers usually “speak of writing code not only as an engineering problem but also as an aesthetic pursuit, a matter of style and elegance that makes coding an act of self-expression” (Weber 2004, p. 136; see also Knuth 1974). Accordingly, the product of this scientific and artistic process, FOSS demonstrates programmers’ technological virtuoso (i.e., they master necessary algorithms, theories, rules, patterns of designs) and their elegant aesthetic tastes and styles. Now if we also consider the quotations of Mike, Songbai, Qingyun, and Yuanbo in Theme One as well as
the quotations of Levy in the sub-theme of Creativity as a Journey toward a Moral Destiny, which collectively suggest the moral values of freedom, public interest, and egalitarianism, we could argue that FOSS programmers’ creative process is also a process in which FOSS programmers express their moral values as well as their technological virtuoso and aesthetic tastes and styles.

It is only by locating FOSS programmers’ creativity within the context of modernity that we can grasp its full implications. Modern individuals, including FOSS programmers, internalize both rationalism and Romanticism (Berman 1972, 1988; Taylor 1989). Whereas Romanticism is a historical, cultural rebellion against the rationalism of modernity, Romantics inherited the idea of self-determining freedom from earlier Enlightenment rationalists (Löwy and Sayre 2001). Logically, the two conflicting ideologies are not necessarily refuting each other. Rationalism and Romanticism could be held simultaneously by a modern individual. In fact, since the beginning of the Free Software Movement, FOSS programmers’ creativity is motivated by “Kantian ethics,” according to which “the desire to be rewarded for one's creativity does not justify depriving the world in general of all or part of that creativity” (quoted from the online The GNU Manifesto, Stallman 1985). And, Kant's moral philosophy dialectically fuses rationalism and Romanticism to a certain degree.

Following Rousseau who rejects amoral utilitarianism (a version of rationalism), Kant argues that human beings are independent, free, self-responsible moral/rational agents, who become more rational while becoming more determined to act only by universal maxims and to treat all rational beings as ends. For Kant, freedom means following the demand of one’s reason (i.e., one is free only when one's actions are
motivated by one’s own reasoning) and goodness means freedom. So, with Kantian rationalism, reason, universal beneficence, and freedom are united. However, because it is a theory of freedom, the Kantian moral philosophy finds it hard to ignore the criticism that the rational agent is not the whole person” and because it is a theory of freedom, the view of nature as a [moral] source [i.e., Romanticism] cannot ignore the point that mere sinking into unity with nature would be a negation of human autonomy” (Taylor 1989, p. 385). Thus, Kant proposes a reunion of reason and nature, a condition that is defined by the highest requirement that virtue and happiness are coordinated. And, Kant further argues: “Perfected art becomes nature again; which is the final goal of the moral destiny of the human race” (cited in Taylor 1989, p. 385). As a result, Kant’s moral philosophy reunites rationalism (which emphasizes human beings’ objective reasoning) with Romanticism (which emphasizes free, artistic self-expression and returning to the natural world) on the foundation of the morality of self-determining freedom (which is inseparable from universal benevolence) to a certain degree. For Kant, reason, morality, freedom, and artistic-expression are reunited dialectically.

In the context of FOSS community, they reunite rationalism and Romanticism in their creative activities and this reunion is illustrated in discourses about their creative activities. As we discussed in the sub-theme of Creativity as a Journey Toward a Moral Destiny, FOSS programmers develop their moral values and their individual understanding of these values from their interaction with each other as well as with proprietary software companies. Within the FOSS community, when some programmers emphasize technological excellence of FOSS (which is consistent with rationalism) and the fun of free, artistic expression (which is consistent with the Romantic ideal of free,
artistic expression) in writing FOSS, some other programmers argue for the primacy of the moral values of freedom, public interests, and egalitarianism (which are consistent with a Romanic version of an ideal community). In addition, when some male FOSS programmers intentionally or unintentionally claim the superiority of male programmers, indicating the existence of sexism regarding creativity (which is a cultural, historical baggage of rationalism and Romanticism), female FOSS programmers and some other male FOSS programmers challenge sexism as immoral and propose their own versions of egalitarianism and paradise.

In society, when proprietary software companies argue that the open source code practice reduces economic incentive for people to contribute their creative ideas to the public (this idea is consistent with instrumental rationalism), FOSS programmers contend that sharing with others is of the human nature (this idea is consistent with the Romantic ideal of sharing among community members), that the open source code practice allows all people to freely engage in creative activities as they want (this idea is consistent with the Romantic ideal of unconstrained self-expression) and to contribute more creative ideas to the public (this idea is consistent with instrumental rationalism), and that proprietary software is purely profit-driven and prevents people from contributing more creative ideas to the public. In addition, when proprietary software companies, based on the logic of efficiency, argue that proprietary software companies have more efficient management style and that proprietary software are technologically better than FOSS, FOSS programmers contend that their freedom-oriented creative process is more efficient to produce better software because FOSS programmers freely share code and opinions
with each other and write code in a freer state rather than being constrained by employers’ requirements.

So, FOSS programmers’ moral values arise from the contextualized, dialectical interplay between rationalism and Romanticism as well as the cultural, historical baggage of the two ideological systems (i.e., sexism). For FOSS programmers, rationality (which is illustrated in their pursuit of technological excellence, and efficient software development model), morality (which is illustrated in their pursuit of freedom, public interests, and egalitarianism), and artistic-expression (which is illustrated in their pursuit of unconstrained self-expression and elegant code) are fused together in their creative activities, which abound in collisions among their pursuits of rationality, morality, and artistic expression.

5.3.4 Building Identity through Co-Creation

Engaging in a co-creative process involves the fusion of rationalism and Romanticism. By dialectically fusing these two ideologies, FOSS programmers collectively construct their identity—a craftsperson who is an artist-scientist-moral-warrior, as is illustrated by Figure 5-4A and Figure 5-4B.
Figure 5-4A

Levitating, Meditating, Flute-Playing Gnu

(Available at: http://www.gnu.org/graphics/meditate.jpg)

Figure 5-4B:

Levitating, Meditating, Flute-Playing Gnu

(Available at: http://www.gnu.org/graphics/meditate-fs.jpg)

Figure 5-4B is an avatar created by María del Pilar Saenz (a FS programer) based on the avatar (Figure 5-4A) drawn by artists of the Nevrax Design Team (some external
artists) for the Free Software Foundation. The geneology of Figure 5-4B demonstrates the value of freedom of the FS movement. The original avatar (Figure 5-4A) does not include the words “free software.” But because Figure 5-4A is published under two free software licenses, it allows other people to modify it (e.g., María del Pilar Saenz added the words “free software” as the background of the image of Figure 5-4A). According to the Free Software Foundation (http://www.gnu.org/graphics/meditate.html):

This color drawing depicts a levitating gnu, deep in meditation, wrapped snugly in a gold robe. Both he and his computer float gracefully above the floor—only his tail lightly touches the ground. He gently holds a recorder [i.e., the flute] between his front hooves, as if he has just gotten the inspiration to charm his computer with music. There is a gleam in his eyes as he gazes ahead at his computer screen.

This is an informative interpretation of the elements of this avatar. This interpretation perfectly illustrates the FOSS community’s fusion of rationalism and Romanticism. In this avatar, a gnu, a symbol of moral courage and a symbol of FS programmers who hold to the moral value of freedom and desire to return to the natural world and human nature (please see my interpretation of the image of gnu in Figure 3 in Theme One), is meditating like a Zen master with a liturgical robe of purity (many programmers see programming as practicing the art of Zen; see James 1988). By engaging in deep meditation (a process in which one gives up all profane thoughts and emotions and enters into an absolute rational state according to Zen), he (a female FOSS programmer would like to use the words of he or she) gets inspiration from his own inner world. And, he expresses his insights from this inspiration or his inner voice (i.e., his values and ideologies) through his music (i.e., beautiful code of free software). By
playing his magic flute (i.e., expressing his inner voice by writing beautiful code) toward a computer (i.e., a machine that embodies the creative power of human reason), he charms the computer with his music and gives light to the computer with his gleaming eyes. The gnu gives life to the computer, suggesting free software’s empowering and liberating effect on computers as well as their users, most of whom are controlled by immoral proprietary software. This liberating effect of creating free software is illustrated by Qingyun’s elaboration on freedom (see quotation from Qingyun in the sub-theme of The Value of Freedom of Theme One).

As a result of this magic process that integrates the gnu’s mythologized highest rationality, artistic imagination, and moral courage to liberate computers and computer users, the gnu (i.e., the FS programmer) lifts the computer and himself into a levitating state, a free, graceful, floating, and delighted state. It is not only a process of integration of rationalism and Romanticism but also a process of both self-lifting/self-recreation and world-lifting/recreation. As a self-lifting/self-recreation process, creating FOSS together with fellow community members helps FOSS programmers to grow their own programming skills, to express their insights and passions, to realize their values of freedom, public interests and egalitarianism, and to realize their sense of self. As a process of world-lifting/recreation, creating FOSS helps FOSS programmers to create not only technologically excellent software and open computer systems but also a new paradise in cyberspace.

However, as their moral values are developed, contested, and negotiated through interactions with each other as well as proprietary software companies, FOSS programmers can build such an identity only through such interactions. Because one’s
identity can be built only through interactions with one’s fellow community members as well as social actors outside one’s community, because the identity of a FOSS programmer is closely related to his or her co-creative process, and because FOSS programmers’ moral values, the core element of their identity is also a product of the interactions among FOSS programmers, individual FOSS programmers have to engage in the creative process of the FOSS community to build their ideal identity—a craftsperson who is a scientist, artist, and moral warrior. Thus, although they might experience many negative emotions due to various conflicts as we discussed in Chapter Two, they need to stay in this conflict-laden creative process, a process that is a foundation of their identity building project.

Of course, different FOSS programmers adhere to rationalism and Romanticism and integrate reason, morality, freedom, and artistic self-expression to different degrees in different contexts. The fusion of rationalism and Romanticism within an individual programmer could be very dynamic. For example, at one time in an interview, Stallman said: “Software is functional, not artistic primarily. In that it resembles other things, like recipes, dictionaries and textbooks” (quoted from Stallman; cited in Wynants 2005, p. 79); at a different time in the same interview, he emphasized the morality of free software. However, in his response to the question “Is programming an art or science?” he wrote: “I would describe programming as a craft, which is a kind of art, but not a fine art. Craft means making useful objects with perhaps decorative touches. Fine art means making things purely for their beauty. Programming in general is not fine art, but some entries in the obfuscated C contest may qualify” (cited in the online article of “Art and Computer Programming,” Littler 2005). In addition, there is heterogeneity among different
individuals. For example, while Guido van Rossum, a famous FS programmer argues that programming is an artistic process because one artistically applies scientific knowledge in programming and expresses one’s style and taste in one’s code, Erik de Castro Lopo, another famous FS programmer, believes that programming is a more rational process in which programmers have to follow many technological standards (Littler 2005).

But, to understand FOSS programmers’ creativity comprehensively, we need to consider rationalism and Romanticism together because of their cultural and logical relationships to each other. Doing so, we can at least partially explain paradoxes and conflicts discussed in Theme Two. First, as we have discussed in Theme Two, because of the historical, negative baggage of the Romantic perspective of creativity that sees a male artist as the archetypical image of a creative person, some male programmers discriminate against women programmers. But female programmers resort to the value of egalitarianism, which is an archetypical element of a genuine Romantic community, to fight against the negative baggage of Romanticism. Second, Kadim, an OSS programmer, sadly left the OO.o project because he believed that Sun immorally exploited the creativity of external programmers, that his code was unreasonably rejected for a non-technological reason, and that his free-expression was constrained by the profit-driven practice of Sun. Third, because individual FOSS programmers integrate reason and morality to different degrees, some FS programmers (Owen, Oliver, and Otto) emphasize technological convenience and develop free programs that could be used on the Window operating system, while Freeman emphasized the value of freedom for all, only uses free software, and dislikes the practice of Owen, Oliver and Otto. Fourth, because FOSS programmers hold a rational perspective of their creative process, they believe that,
through rational discussion, best ideas could be selected from competing ideas contributed by different programmers. So, FOSS programmers often engage in technological discussions through postings on their mailing lists, which could evolve into heated debates or flamewars.

5.3.5 Technology as a Reflection of Moral Values

One implication of the ideological fusion of rationalism and Romanticism is that FOSS is not merely a tool or means to solve some technological or engineering problems but an intrinsically meaningful end in itself—FOSS is a form of self-expression of FOSS programmers in terms of a technological virtuoso, aesthetic tastes and styles, and moral values. The perception that a program is a programmer’s self-expression explains why some programmers (e.g., Mike, Kadim) felt so frustrated when they work for a constraining employer or a business sponsor: one’s sense of self will be constrained if one cannot freely express one’s skills, tastes, and moral values in one’s specific creative process and finally actualize these skills, tastes and moral values in one’s creative products.

Particularly, for FOSS programmers, FOSS and proprietary software, two forms of technology, reflect different moral values of FOSS programmers and proprietary software companies respectively. In an interview about the Defective by Design campaign launched by the Free Software Foundation, Stallman commented on Digital Rights Management (DRM): "Digital Restrictions Management refers to the practice of designing programs to restrict their users. These programs have been equipped with the functionality of refusing to function. They are not designed to work for you, they are
designed to control you” (available at: http://www.zeuux.org/law/billxu-rms-drm.html).

Like many free software programmers, Stallman replaced the term “rights” with "restrictions” when he used the term DRM to indicate the immorality of the creators of Digital Rights Management technologies, which are companies that aim to control users’ freedom. In contrast, free software embodies the moral values of freedom, public interests, and egalitarianism, as illustrated by the quotations of Qingyun, Yuanbo, and Arthur in Theme One.

However, the moral values of the creator of a technology do not necessarily decide the morality of the impact of the technology on human well-being and the natural environment. When users of FOSS follow the moral values of the FOSS programmers by obeying the requirements of various FOSS licenses protected by copyright laws (e.g., users release the source code of their modifications to the public), their usage will further promote the values of freedom, public interests, and egalitarianism and anyone else can benefits from their released source code. If users such as some proprietary software companies do not open the source code of their proprietary software which is derived from the source code of certain FOSS (see examples of such companies at http://gpl-violations.org/), these users not only block the promotion of the moral values of FOSS programmers but also illegally make profit from FOSS.

So, in the context of the FOSS community, the effects of software (a specific form of technology) on human well-being and the natural environment depend on what moral values guide the ways in which this technology is developed and used. This means that, the effect of technology as an abstract category is undetermined—technology is not
inherently a divine tool (Thompson 2004) or a modern monster destroying traditional ways of life (Kozinets 2008).

5.3.6 Summary of Theme Three

FOSS programmers dialectically fuse rationalism and Romanticism in their perspectives of creativity. For FOSS programmers, creativity is a community-based journey toward a moral destiny; and morality arises from the interplay between rationalism and Romanticism, and the cultural, historical baggage that comes from these two ideologies (i.e., sexism in the domains of both science and art). On this journey, FOSS programmers construct their identity. In their interactions with each other and with proprietary software companies, FOSS programmers build their identity—a craftsperson who is a scientist, artist, and moral warrior, the meanings of which are in an ongoing contest. In a certain sense, FOSS, a form of technology, becomes a representation of this identity; furthermore, FOSS reflects the moral values of FOSS programmers, a core element of their identity.

Due to their different understanding of the values of freedom, public interest, and egalitarianism as well as different technological preferences, FOSS programmers develop, contest, and negotiate their communal moral values as well as debate on technological issues with each other, leading to conflicts between individual community members and between common community members and certain authoritative community members (a person or an organization). In addition, FOSS programmers also develop and articulate their moral values in and through their interactions with proprietary software companies. Whereas the conflicts among FOSS programmers might be charged with various strong
negative emotions, FOSS programmers still enthusiastically engage in the creative process of the FOSS community because creativity is innately community-based and one’s identity is constructed only by interacting with fellow community members as well as proprietary software companies. The innate desire to embark on a journey of morality can only be accomplished in this creative community. While these conflicts might be seen as troubles in paradise, these conflicts might be also a sign of a genuine community because, in the FOSS community as a whole, individual members have the freedom to express their own ideas and engage in dialogue, no matter how emotion-charged the dialogue may be. In fact, for Rousseau, a completely uniform community without allowing individuality is inauthentic (Berman 1972). Within the FOSS community as a whole, even if one FOSS programmer feels constrained in one project community, he or she has the opportunity to initiate or join a new project community to express and actualize his or her creative ideas and moral values, core elements of their sense of identity. As a result of this identity-building process, FOSS, a form of technology, becomes a representation of the identity of FOSS programmers. Accordingly, FOSS reflects the moral values of FOSS programmers.

5.4 Summary of Chapter Five

In Chapter Five, we find that, in the context of the FOSS community, creativity is a community-based journey toward a moral destiny or a new paradise, along which community members collaborate with and sometimes confront each other to co-create their perceived paradise. This paradise is morality-oriented; and morality arises from the interplay between rationalism and Romanticism, and sexism, the cultural, historical
baggage of these two ideological systems. This paradise is not conflict-free. However, these conflicts are an inseparable part of the creative process of the FOSS community. Along the journey toward their moral destiny, FOSS programmers co-create not only innovative programs which solve technological or engineering problems, but also their identity (i.e., a craftsperson who is a scientist, artist, and moral warrior), which is represented by specific programs they co-create. Accordingly, FOSS, a form of technology, reflects the moral values of FOSS programmers, a core element of their identity.

There are three themes in Chapter Five. In Theme One (*Recreating a Paradise in Cyberspace*), we find that FOSS programmers hold a Romantic perspective of creativity. In their creative process, FOSS programmers perceive that they are at home; that is, they are returning to the natural world and human nature. Whereas they are aware that capitalism is enabled by technology to secure for itself a measure of consent” (quoted from an online paper of Molglen 2003), FOSS programmers perceive that they are creating a paradise in cyberspace, a technology-supported virtual natural world where the values of freedom, public interests, and egalitarianism hold. So, for FOSS programmers, creating and using FOSS is a journey toward their paradise in which they beat profit-driven, constraining proprietary software companies.

In Theme Two (*Troubles in Paradise*), we find that the creative process of the FOSS community is not always pastoral as FOSS programmers (particularly their leading ideologues) claim in their public discourses. We find that there is rampant sexism that paralyzes their paradise, a lasting prejudice that can be traced back to Bacon (a rationalist) and Rousseau (a Romantic) whose philosophies have great impact on the FOSS
movement. Female programmers establish their own communities within the FOSS community and aim to build a paradise different from that of some male programmers. We also find that some programmers might experience *alienation* and *exploitation* in their co-creation process with certain companies due to disagreement on who owns these programmers’ creative products. In addition, it is found that the popularly assumed collaboration and enjoyment could co-exist with *confrontation* and *bitterness* in the creative process of FOSS programmers due to their disagreement on some technological issues. Finally, creativity is *infused with politics*. FOSS programmers who hold various values to different degrees and have different understanding of the political implications of creativity might *refuse to help* each other and *reject help* from each other.

In Theme Three (*Dialectally Fusing Rationalism and Romanticism*), we reconcile the seemingly inconsistence between Theme One and Theme Two. We trace back to two ideological roots of the values of the FOSS community and the conflicts FOSS programmers experience based on some textual and visual narratives of the FOSS community. We find that, for FOSS programmers, creativity is a journey toward to a moral destiny; and morality arises from the interplay between rationalism and Romanticism, and the cultural, historical baggage of these two ideological systems (i.e., sexism in the domains of science and art). Along this journey, in collaboration and confrontation, when they co-create FOSS, FOSS programmers also co-create and negotiate their identity—a craftsperson who is a scientist, artist, and moral warrior. Accordingly, FOSS, a form of technology, reflects the moral values of FOSS programmers, a core element of their identity.
Chapter 6

Discussion

6.1 Conclusions

In the context of the FOSS community, creativity can be defined as a journey toward a moral destiny, with morality arising from the interplay between rationalism, and Romanticism, and the cultural, historical baggage that comes from these ideological systems (i.e., sexism in the domains of science and art). This journey is laden with paradoxes and conflicts at the individual, community, and society levels. On this journey, in and through the creation of FOSS, FOSS programmers build their morality-oriented identity in their interactions with each other as well as with proprietary software companies. This identity building project is so powerful that FOSS programmers enthusiastically stay in their community-based creative process even though they experience multiple paradoxes and conflicts. For FOSS programmers, technology (e.g., the software which is the creative product of FOSS programmers) is not only a tool to solve certain technological problems but also a reflection of their identity and morality.

Based on the findings in Chapter Five, now we can answer the research questions developed in Chapter Three. (1) How do individual consumers interpret their quest for creativity (their motivations, creative process and product)? It is found that individual FOSS programmers perceive their creativity as a community-based, ongoing, dynamic process in which they co-create their common identity of a scientist, artist, and moral fighter, their technologically excellent and morally good programs, and a social space where they could actualize their treasured moral values. (2) How do individual
consumers negotiate the identity self-expressive aspects of creativity in the face of social judgment within their community and in society? It is found that individual FOSS programmers engage in both technological and ideological dialogues with fellow community members and proprietary software companies to negotiate and express their individual technological expertise, artistic tastes, and moral values. (3) How do individual consumers interact with each other and with companies to build/express/actualize their identities in the process of creating their common products (e.g., an idea, an experience, or a solution)? It is found that individual FOSS programmers both collaborate with and confront each other and with proprietary software companies to build/express/actualize their identities in their creative process. (4) What are the political, cultural, and managerial implications of consumer creativity? We will discuss the political and cultural implications in Section 6.3 and the managerial implications in Section 6.4.

6.2 Contributions

Consistent with Consumer Culture Theory research that focuses on values and ideological struggles involved in modern consumption activities (Arnould and Thompson 2005), this current study contributes to the marketing literature on consumer creativity by providing a political-cultural theorization of consumer creativity embedded in dynamic, conflict-ridden consumer communities. Specifically, this current study has three theoretical contributions to the current marketing literature on consumer creativity: it introduces the moral dimension of consumer creativity (in contrast to previous studies which are dominated by an instrumental approach toward consumer creativity), examines the paradoxes and conflicts inherent in the creative process and related political
implications (in contrast to previous studies which focus on the harmonious aspects of the creative process), and links the effects of a technology (i.e., a creation of human beings) to the moral values of its creators and users (in contrast to previous studies that assume either a good or a bad essence of technology).

First, by introducing the moral dimension of consumer creativity, this study enriches the current marketing literature on consumer creativity which is dominated by an instrumental perspective of creativity. Highly influenced by the psychology literature on creativity, the current marketing literature on consumer creativity focuses on the technological, problem-solving dimension, taking an amoral approach toward consumer creativity. The current literature has examined how consumers solve their own technological and/or functional problems (Hirschman 1980, 1983; Jeppesen and Molin 2003; Burroughs and Mick 2004; Moreau and Dahl 2005; Dahl and Moreau 2007; Franke and Shah 2003; Kozinets et al. 2008) and how companies co-create innovative solutions to technological or functional problems with consumers by observing consumers’ consumption practices, interviewing consumers, conducting focus group research, and providing consumers with facilitating environments (e.g., offline and/or online workshops) and toolkits (Durgee 1987; Alam and Perry 2002; Chesbrough 2003; Hemetsberger and Godula 2007; Jeppesen 2005; Hoffmann 2007; Schau, Muniz, and Arnould 2009). These studies have greatly helped us to understand specific psychological, social, and cultural dimensions of consumer creativity. For example, Moreau and Dahl (2005) conceptualize consumer creativity as a psychological process and state that consumer creativity has two dimensions: novelty (e.g., originality, uniqueness) and appropriateness (e.g., usefulness, effectiveness). In their study, Moreau
and Dahl (2005) measure appropriateness with three instrumental items (i.e., not at all practical/very practical, not at all effective/very effective, not at all useful/very useful). This study improves our understanding of the creative cognition process which consists of the generative process (i.e., the process that generates preliminary mental representations of a solution) and the exploratory process (i.e., the process that searches for different meanings to attach to and/or to interpret the preliminary solution). This study also identifies the relationship between the creative cognition process and the two dimensions of consumer creativity.

The amoral approach toward consumer creativity of Moreau and Dahl (2005) and other researchers is fruitful for their specific research goals. But in certain contexts, consumers might create for some moral reasons which are ignored by the current marketing literature on consumer creativity. To better understand the meanings of creative consumption practices in consumers’ daily lives, we need to understand the moral dimension of consumer creativity because moral values are a central element of modern individuals’ sense of self and identity (Taylor 1989) and therefore a central part of “e-consumer identity projects” that are based on their creative consumption practices (Arnould and Thompson 2005, p. 871).

In contrast, this current study finds that consumer creativity is a journey toward a moral destiny. While consumers may engage in creative activities for instrumental reasons (e.g., solving a technological problem at hand), consumers also engage in creative activities in order to build an idealized social space where their treasured moral values may be actualized. Particularly, in the context of the FOSS community, creativity is an ongoing, dynamic, evolving process in which individual FOSS programmers learn,
develop, internalize, contest, and negotiate the moral values of the FOSS community (i.e., freedom, public interests, and egalitarianism). This is a process in which FOSS programmers aim to create a social space where they can actualize these moral values and to build their identity as a craftsperson, who is a scientist, artist, and moral warrior, in their interactions with each other as well as with proprietary software companies. This finding enriches the current marketing literature on consumer creativity by highlighting that, consumers not only solve some of their individual consumption problems (Hirschman 1980, 1983) and engage in various psychological, social, and cultural processes in their creative consumption activities, consumers also engage in a dynamic moral process in which they develop, contest, negotiate, and actualize their moral values.

Second, this current study contributes to the marketing literature on consumer creativity by examining the paradoxes and conflicts that are inherent in the creative process. Previous studies on consumer creativity focus on the harmonious dimension of the creative process, whether these studies examine the creativity of isolated individuals (Moreau and Dahl 2004; Dahl and Moreau 2007) or the creativity embedded in a consumer community (Kozinets et al. 2008; Schau, Muniz, and Arnould 2009). In contrast, this current study illustrates that creativity innately involves challenging perceived improper practices, norms, and authority according to specific communal criteria (e.g., moral values), which are themselves under continuous reconstruction and reinterpretation.

Whereas a few previous studies in the marking discipline (Firat and Venkatesh 1995; Holt 2002; Kozinets 2002b; Thompson and Coskuner-Balli 2007) examine certain moral tensions which consumers might experience in their creative process, these studies
focus on the moral tensions between consumers (either as isolated individuals or as a community) and dominant corporations. That is, these studies focus on the moral conflict at the society level (please refer to Figure 3-1). The current study simultaneously examines the paradoxes and conflicts at the levels of the individual, the community, and the society, illustrates the intertwined relationship among the three levels of paradoxes and conflicts, and thereby extends our theoretical understanding of moral tensions involved in consumption activities.

In this current study, we find that the moral values of contemporary consumers like FOSS programmers arise from a dynamic interplay between rationalism and Romanticism, and the cultural, historical baggage that comes from these two ideological systems. In the FOSS community, the ideology of rationalism is illustrated in the community’s advocacy for rational dialogue among community members about any technological and non-technological issues, popularity of voting systems to select proper code (e.g., the voting system in the Debian community), and arguments for the high efficiency of a FOSS development model and technological excellence of FOSS. At the same time, highly influenced by the philosophies of Rousseau and Kant (Berman 1972; Taylor 1989) that integrate rationality, morality, freedom, and beauty, FOSS programmers display in their narratives a sense of nostalgia for a lost paradise, a desire to return to the natural world and a perceived natural state of human beings (which is defined by the values of freedom, public interests, and egalitarianism), and a longing for artistic self-expression. For FOSS programmers, rationality, morality, freedom, and beauty are inseparable in their creative process. These ideologies carry great historical and cultural baggage which may further fuel tensions between co-creating partners. For
example, some FOSS community members hold a sexist view of creativity, a cultural relic of a perspective that can be traced back to the Romantic image of creator as a male artist.

It is due to this dynamic interplay that individual FOSS programmers experience three levels of paradoxes and conflicts. At the individual level, a FOSS programmer might experience some intrapersonal paradoxes and conflicts. For example, although informants in this study did not directly discuss how they feel about developing proprietary software during their paid working time while developing FOSS in their spare time, Levy’s statement that he felt better making a living at providing consulting services related to FOSS implies an intrapersonal paradox that a FOSS programmer might feel when he or she works for a proprietary software company but contributes his or her talents to a FOSS project during spare time. Another example is that, whereas some male FOSS programs advocate egalitarianism, they intentionally or unintentionally produce sexist narratives about female programmers. At the community level, due to disagreement on technological or moral values, individual community members might engage in emotion-charged flamewars with each other; and a consumer community might be divided into sub-groups or sects that understand and apply the same moral values in different ways (e.g., within the Emacs community, Owen, Oliver, and Otto consist of a small group that work on a program that can be used on the Windows system, a group with which Freeman and Stallman disagree). At the society level, a consumer community (e.g., the Apache community) might challenge perceived immoral companies (e.g., Microsoft) and laws (e.g., copyright laws) by creating specific programs (which are FOSS) and narratives. But at the same time, this consumer community might accept
technological and financial support from these same companies (e.g., Microsoft) in order to co-create value with these companies. It is because of both the confrontation and collaboration relationship between the FOSS community and some proprietary software companies that, although some programmers such as Stallman have a strong negative attitude toward proprietary software companies, some other programmers have a blended feeling toward some proprietary software companies. For example, Levy showed his due respect toward Sun because its employees had done lots of work on OpenOffice.org. This finding is complementary to the finding of previous consumer culture studies that creative consumer communities either confront (Kozinets 2002b) or collaborate (Muñiz and O’Guinn 2001) with dominant companies.

In addition, the current study illustrates that consumer creativity has rich political implications in that consumer creativity could change the power relationships within consumer communities, and between a consumer community and proprietary knowledge-based companies and copyright laws that support these companies. So, through their creative consumption practices in interactions with each other and with corporations, individual consumer community members co-create not only their idealized social space where they actualize their moral values and build their identity, but also new power relationships in their community and the marketplace.

Third, this study enriches the current marketing literature on the impact of technology on human well-being and the natural environment. In the marketing literature, there are at least two streams of studies on this issue: the instrumental stream and the essential stream. The first stream takes an instrumental approach toward technology, assuming that technologies are amoral, neutral tools to solve some technological and/or
social problems. For example, Mick and Fournier (1998) find eight paradoxes of technological products and explore consumers’ emotional reactions and behavioral coping strategies, without discussing moral values-related paradoxes that consumers might experience when they consume technological products.

Different from this first stream of studies, the current study finds that technology might be laden with moral values and its impact on human well-being could be morally good or bad. In some contexts (e.g., in the domain of software), when some consumers perceive that some technologies (e.g., proprietary software) immorally constrain consumers’ freedom to use/modify these technologies in their own ways, to share these technologies with others, and to create new technologies based on these technologies, some of these consumers might create their own technologies (e.g., FOSS), which could embody their own moral values and subvert these perceived immorally constraining technologies (e.g., FOSS threatens the survival of proprietary software). But, these creative consumers cannot successfully create their own technologies that can replace those technologies which they perceive to be morally bad at any time. In this situation, some of these consumers choose not to use the perceived morally bad technologies (e.g., Stallman only uses free software in his daily life); but some of these consumers might choose to use these morally wrong technologies because they have to use them in their daily lives. For example, Mark (one of my informants) still uses a few proprietary programs in some devices other than computers. Whereas Mark did not talk about his negative emotions toward these proprietary programs, his years of committed involvement in the Debian project community and his negative comments on proprietary programs imply that he might experience some negative emotions to a certain degree.
This might be possible because these proprietary programs embody moral values that conflict with the moral values of the free software movement rather than because these programs are not technologically good.

The second stream takes an essential approach toward technology, which sees technology as either a divine tool that is inherently a force of good or a threat to the natural world and traditional ways of life (Thompson 2004; Kozinets 2008; see also Davis 1998). Despite their difference, these two views of technology commonly assume that there is a moral essence of technology as an abstract category (i.e., technology is either good or evil in its nature in term of morality). Particularly, in the research contexts of Thompson (2004) and Kozinets (2008), it is found that some consumers experience an intrapersonal conflict when they move between these two conflicting views. In addition, this second stream implicitly treats technology as a static product of the creative process of certain creators (corporations are usually assumed to be the primary creators) and thereby implies a static impact of the technology on human well-being and the natural environment.

Different from the second stream that treats all kinds of technology as a whole, this current study finds that, in the context of the FOSS community, the impact of a technology on human well-being is influenced by the moral values of the creators and users of this technology and by the dynamics among creators and users, who could be the same or different social groups. In context of the FOSS community, on the one hand, whereas FOSS programmers create software that help users to enjoy the freedom to study, copy, modify and redistribute software, proprietary software corporations develop proprietary software that constrains users‘ freedom. On the other hand, a technology
might not be a final product of a creative process of certain creators only. In contrast, a
technology is emergent and there could be multiple, ongoing contests centered around the
moral values (which the specific technology embodies) in the ongoing creative process in
which the technology is created and recreated by multiple social forces. Whereas FOSS
programmers can continuously upgrade the same FOSS and use existent FOSS to create
new FOSS in collaboration; proprietary software companies can use the source code of
open source software to develop proprietary software. Some proprietary software
companies even illegally develop proprietary software based on the source code of free
software and the FOSS community has successfully forced these proprietary software
companies to correct their illegal practices (see the reports of such events at: http://gpl-
violations.org/). So, it is possible that some users (e.g., corporations who use the source
code of free software to develop proprietary software) could use a technology in a way
which embodies moral values that are different from those of the original creators. Thus,
the impact of the specific program on human well-being could be changed in the ongoing
interaction between creators and users.

Another example that a technology could have changing impact on human well-
being is the program of Netscape Communicator 4.0. It was in January 1998 that
Netscape opened the source code of its browser Netscape Communicator 4.0. Netscape
took this action in order to take advantage of the creativity of the FOSS community in its
own competition against Microsoft whose Internet Explorers had grabbed most of the
market share of Netscape's browser. Before that, its browser was a proprietary program.
Since then, Netscape has publically embraced the moral values of the FOSS community
and the later versions of the program of Netscape Communicator have embodied these
moral values to a certain degree. Accordingly, the impact of the program of Netscape Communicator has changed in the ongoing creative process in which Netscape co-creates with external FOSS programmers and competes against Microsoft.

So, the impact of a technology (e.g., free software) on human well-being or the natural environment could be a dynamic process, as the creative process itself, which is influenced by the ongoing moral contest among relevant social forces (e.g., the FOSS community, proprietary software companies).

6.3 Political and Cultural Implications

Creativity in its essence means challenging established ideas, criteria, and rules and thereby challenging established authorities and power structures legitimized by these ideas, criteria, and rules. Whereas individuals might not intentionally pursue power, authority, and status within their community and the larger society, their creative activities can change their positions in the power structures of their immediate communities and the larger society. Within a creative consumer community, individual members‘ authority, power, and status change with how many of their ideas or solutions have been integrated into the creative products of the community and how creative these ideas and solutions are in comparison with other community members. In a certain sense, individual consumer community members‘ engagement in the creative process of their community is a driving force behind the dynamic distribution of power, authority, and status among community members.

At the societal level, individual consumer community members could challenge certain established business practices of dominant corporations, which are perceived to be
forces constraining the general public’s creative activities, and institutions that support
and legitimize these business practices. Particularly, the current copyright laws have been
frequently challenged by consumers. In a certain sense, the current copyright laws stand
for not only a constraining legal system but also a constraining political system which
protects and legitimizes the prevailing power relationships between consumers and
dominant corporations. So, when individual consumer community members engage in
their creative activities, these individuals as well as their communities are creating not
only technologically innovative solutions but also new power relationships between
consumers and the dominant corporations/legal system.

It should also be noticed that the open nature of many consumer communities (i.e.,
these consumer communities are open to everyone without intentionally setting any entry
barrier to any social groups) such as the FOSS community provide an opportunity for
some social groups who lack accesses to some resources to develop their own creative
potential. On the consumer community side, by freely sharing their creative products
such as software, educational materials, and technological solutions to certain
consumption problems as free gifts with the general public, this community provide a
valuable opportunity to people who come from disadvantaged backgrounds and lack
financial and other resources to learn knowledge and skills embedded in these free gifts.
For example, people from low-income families who could not afford expensive
educational expenses can freely learn knowledge and skills which are necessary for their
personal development and career progress in the society; therefore, these people could, at
least partially, overcome the negative impacts of the economic inequality on their
personal development and career progress. In addition, women, who are usually
constrained by popular stereotypes of gender roles and are discouraged to learn
knowledge and skills that they want and/or need to learn in the prevailing educational
systems and organizational cultures, could more easily learn the knowledge and skills by
studying the free gifts of specific creative consumer communities. By giving learning
opportunities to people from disadvantaged social groups, creative consumer
communities help level the playground in the society.

The implications of consumer creativity are not limited to the dynamic
distribution of power, authority, and status within a consumer community and a society.
Consumer creativity also has rich cultural implications. Within a consumer community,
individual community members might engage in the creative process of the community
not only for creating some technologically excellent solutions, aesthetically pleasant
designs, and/or experientially exciting products, but also for creating a sense of identity, a
sense of existential state, and a sense of meaning in life. It is in their community-based,
dynamic creative process that they are answering the following questions: —Who am I/are we?” —Who are my/own enemies?” —Where am I/are we?” —Where should I/we go?”
During their creative process, individual community members might develop their
individual distinctiveness (in terms of technological expertise, artistic tastes, and
commitment to communal values), and explore, negotiate, and update their fluid common
identity, and moral values or interpretation of their moral values (as well as their
enemies’ identities). In their creative process, they are (re)creating themselves and a
dynamic social space where they could actualize their identities and moral values.

The fact that consumers could create something new is not a new phenomenon.
Human beings —are often ‘everyday creative,‘ or we would not even be alive” (Richards
2007, p. 3) and every individual has the capacity to create (Dacey and Lennon1998). The
difference among individuals in term of creativity lies in the degree of creativity (which
could be measured by the innovativeness of ideas, divergence of ideas, and frequency of
generating new ideas) that individuals show in their everyday lives. But, if every
individual has the creative capacity and engaging in the creative process is a way to
(re)create one‘s identity and to actualize one‘s moral values, why doesn‘t every modern
individual enthusiastically engage in the creative activities (e.g., designing a new product,
a new business strategy) initiated by his/her employer? Why do so many modern
individuals (e.g., programmers) enthusiastically engage in the creative process of various
consumer communities (e.g., the FOSS community)?

To answer these two questions, we need to analyze how modern individuals
experience the dynamics between rationalism and Romanticism in their working
environments and the specific consumer communities which they join. In a modern
society, rationalism is a dominant ideology. Within a modern organization, planning and
control based on rational cost-benefit analysis are two main management principles.
Within modern organizations, employees‘ professional life experiences are highly
structured according to their employers‘ rationally designed plans. Job descriptions are
usually fixed. Tasks are usually assigned by bosses rather than self-selected. Deadlines
are usually assigned and fixed. More importantly, one employee‘s proven ability to finish
assigned tasks by deadlines is the condition for him/her to keep the paid job. Employees
cannot control when and how to display their creative potential in such modern
organizations. Of course, employees are required to use their technological knowledge
and skills in their daily work. However, as we see in Chapter Five, modern individuals‘
understanding of creativity is highly influenced by both rationalism and Romanticism. For modern individuals, creativity involves not only technological innovation but also spontaneous, artistic self-expression and moral-value actualization. In their working environments where rationalism is dominant, leaving less space for spontaneous, artistic self-expression and moral-value actualization, it would be hard for many modern individuals to see their working experiences as authentic creative experiences. So, on the one hand, modern organizations require employees to follow the command of rationalism; on the other hand, modern individuals pursue the dynamic fusion of rationalism and Romanticism. This ideological contradiction in a modern organization might lead many modern individuals to feel stressful and frustrated in their professional lives.

Thus, when a consumer community opens a social space for modern individuals to experience the dynamic fusion of rationalism and Romanticism, some of these individuals would enthusiastically engage in the creative activities of this community. In this community, modern individuals could perceive that they engage in authentic creative process, in which they could freely develop and voluntarily display their technological skills, artistically express their identities, and freely actualize their moral values.

6.4 Managerial Implications

In this section, we discuss three managerial implications of this study: building a creative community within an organization, co-creating with both consumers and competitors, and being an authentic community member.

6.4.1 Building A Creative Community within An Organization
The creative process of the FOSS community is characterized by the dynamic fusion of rationalism and Romanticism. Specifically, the values of freedom, egalitarianism, and public interests are highly promoted in the creative process of the community and are the three moral pillars supporting the creative process. Based on this understanding, we might be able to build a creative community within an organization (for-profit or non-for-profit organization) by integrating the three values into the following organizational designs.

First, besides assigning projects with fixed deadlines to its employees (Type 1 projects), an organization could initiate some projects that are relevant to its business and invite its employees to participate in these projects voluntarily (Type 2 projects): employees could self-select which projects to work on and self-determine when to stop working on which projects. At the same time, the organization could encourage its employees to initiate projects which are relevant to its business and are interesting to these employees (Type 3 projects). At employees' request, the organization should provide support to Type 2 and Type 3 projects (e.g., providing necessarily equipment, information to these volunteering employees). In addition, the organization might consider allowing its employees to work on the Type 2 and Type 3 projects for a certain number of hours in their working time. These organizational designs might help employees to gain a sense of freedom to create in their own ways.

Second, the organization should do its best to decentralize its project management in all of the three types of projects. For the Type 2 and Type 3 projects, it should do its best to allow these volunteering employees to manage these projects by themselves. One role which the organization's management team needs to take is to facilitate equal
dialogues and constructive debates (i.e., facilitating professional debates which are characterized by divergent thinking, thought-stimulating critique and preventing or stopping personal attacks) among its employees

Third, the organization should encourage its employees to share ideas with each other within the organization. The organization should build an organization-wide online forum on its intranet where all employees could freely express their ideas, ask questions, review others’ ideas, and answer others’ questions. For every project, the organization should require and help the related project team to develop specific web links and mailing lists for the project on its intranet, which are open to all other employees. Project teams are encouraged to document their project progress in details, to post all relevant documents online, and to discuss their projects through mailing lists. The online forum, project web links, and mailing lists collectively act as a creative community hub, which facilitates organizational learning by facilitating individual employees’ free self-expression, open and equal dialogues among employees, and freely sharing knowledge and skills with each other. To encourage its employees to share their creative ideas with each other, the organization should publicly recognize those employees who significantly contribute their creative ideas to their team projects by sharing their ideas in specific mailing lists. In addition, the organization’s HR department should include sharing ideas with other employees into its official performance evaluation criteria.

Fourth, the organization should build a strong organizational culture which is centered around some moral values and recruit employees who identify with these moral values. With such an organizational culture and such employees, the organization can more easily facilitate its employees to engage in the creative process which is
characterized by freely sharing knowledge among project team members. This is because many employees voluntarily engage in creative activities not only for learning/displaying technological skills and fun but also for actualizing their moral values. When employees identify with the moral values of their organization, it would be more likely for these employees to see the creative process of their specific project teams as an authentic creative process, in which they would actualize their own identities and their moral values.

6.4.2 Co-Sponsoring A Consumer Community with Competitors

One popular co-creation practice of a company is that a company may sponsor an online consumer community centered around one of its brands and provide a technologically facilitating environment and some toolkits for consumers to generate innovative ideas, which the company could utilize in its own new product development. Usually, this company requires consumers to transfer the legal ownership of these ideas to the company as Sun did to external programmers of the OO.o project community. One advantage of this practice is that it will prevent competitors from utilizing these ideas freely. This requirement might work in some situations. But, if some members of the sponsored consumer community strongly hold the values of sharing and public interests and feel that their creativity is exploited by the company, these members might refuse to transfer the ownership of their ideas to the company and instead join another consumer community that is perceived freer and fairer. So, the company might lose some its creative consumers. This suggests that companies should reconsider the effectiveness of this practice and might need to loosen its ownership requirement.
In contrast, in the FOSS community, many competing companies, as sponsors, provide technological and financial support to an independent FOSS project (e.g., the Apache project, a project that is not owned by any company). This practice facilitates the creative process of the programmers of this project because they still collectively own their creative ideas, self-determine their creative process, and are not constrained by sponsoring companies' instrumental requirements. Here the programmers benefit from the support of multiple companies. The enhanced consumer creativity means that these sponsoring companies are able to absorb more and better creative ideas from this community as well as enhance their corporate reputation in the FOSS community. In a sense, these companies also indirectly learn from and support each other, forming an informal, loosely connected, and non-binding technological partnership. Another benefit which a sponsoring company might gain is that by donating know-how and solutions to a selected, influential consumer community in a specific market, the sponsoring company could influence the technological directions of the consumer community to the advantage of this company; this second benefit could partially explain why many competing software companies sponsor the same FOSS project. Non-software companies can learn from this practice. By sponsoring a well-selected independent consumer community (that is centered around a relevant product category and opening its creative ideas to the public) without constraining requirements (e.g., requiring transfer of ownership of contributed ideas), companies could benefit more from this creative consumer community. The more companies sponsor a consumer community, the more these companies could benefit from this consumer community.
6. 4.3 Becoming An Authentic Community Member

To be perceived as an authentic community member by a creative consumer community, a company must follow at least two rules. First, a company must give consumers freedom to express their own ideas and treat its consumers as equal partners. Corporate brands themselves are becoming more open source than ever before (Pitt et al. 2006) in that the cultural meanings of brands are open to various stakeholders who can freely (re)make cultural meanings about the brands. This open practice might invite some consumers to produce work that challenges the promoted cultural meanings of a brand. For example, some critical consumers posted commercials about the Dove brand, which ironically use the Unilever Company's own commercials to describe this company as a hypocritical marketer. A sample video clip titled as "A message from Unilever" is available at: http://www.youtube.com/watch?v=SwDEF-w4rJk. Because consumer creativity is a journey toward a moral destiny, a company who sponsors a brand community or an independent consumer community must tolerate consumers' creative works that challenge the morality of the company. Controlling or filtering challenging creative works of consumers is not only impossible but also improper. It is impossible because a company could only control the content of its own web site; but consumers could always find other places in the Internet to express their opinions about a brand. It is improper because it will block consumers' expression of their moral values (e.g., the value of freedom) that are central to the sense of identity of contemporary consumers and thereby alienate consumers from the brand.

A company must see itself and all consumers as equal community members. In its online and offline media, the company should avoid using its sponsor status to screen
challenging opinions of consumers, dominating these challenging opinions by releasing more positive information about itself, or publicly criticizing these consumers (as Microsoft does). Such behaviors could induce more attacks from consumers as the FOSS community does to Microsoft (e.g., the release of *The Halloween Documents*).

Second, the company must continuously examine its own business practices in terms of the moral values held by its consumers, engage in an ongoing dialogue about these moral values with these consumers (rather than ignoring or scolding these consumers), and engage in the creative process of specific consumer communities. For example, Red Hat, Inc. (hereinafter referred to as Red Hat), one famous OSS company whose sales revenue is US$748 million (year ending February 2010), has been engaging in dialogue with free software programmers, some of whom challenge the morality of some of its business practices. Red Hat’s employees, including both high level executives and common programmers, actively participate in the FOSS community’s conferences and seminars, make public speeches to promote the values of the community, and contribute code to the community. Its leaders publicly acknowledge its different views from Stallman and other free software programmers. But, Red Hat is still treated as a highly respected member of the FOSS community. In this current study, Songbai, a hard core free software programmer, is proud of being an employee of Red Hat. In the case of Red Hat, its ongoing dialogue with the FOSS community and its employees’ personal engagement in the creative process of the FOSS community are at least as important as technological and financial support to the FOSS community.

6.5 Limitations and Future Research Directions
Although this study contributes three new findings to the current marketing literature on consumer creativity, this study, as an interpretative study, has its own limitations. First, like many other interpretative studies in the marketing literature that examine specific consumption phenomena in specific contexts, this study is conducted in the context of the FOSS community, which is wrought with specific paradoxes and conflicts, with the intention of developing a rich understanding of consumer creativity in a dynamic context. Similarly, the findings of this study might not be generalizable in other creative consumer communities. Future research could examine paradoxes and conflicts involved in the creative process of other consumer communities to enrich our understanding of the non-harmonious dimension and political implications of creativity in a variety of communities.

Second, in the context of the FOSS community, I examined a limited number of FOSS project communities and interviewed a limited number of community members of these project communities. Thus, the findings of this study might not be generalizable in other FOSS project communities. In addition, although I collected data from several OSS web sites (e.g., Open Source Initiatives, Apache, OpenOffice.org., Go-oo.org) and heavily relied on the postings, blogs, speeches, articles, and books written by some OSS programmers (e.g., blogs of Kadim and Linus, speeches, articles, and books of Raymond) in my analysis, I interviewed one OSS programmer (i.e., Yuanbo) and one programmer who is a member of a FS community and an OSS community (i.e., Songbai). According to their e-mails, all other informants are members of specific FS communities. Although it is assumed that findings based on the historical archives of the selected OSS web sites and the public narratives of OSS programmers such as Raymond are consistent with the
findings based on interviews with OSS programmers of related OSS projects, more interviews with OSS programmers of more OSS projects will provide richer details about OSS programmers’ perspectives of their creative activities. So, although interpretive studies with fewer than 10 informants in the marketing literature are not unusual (e.g., six informants in Kozinets 2007), future research could examine more FOSS projects and interview more OSS programmers to seek richer and potentially different understanding of consumer creativity embedded in the FOSS community.

Third, although some female programmers’ postings were downloaded and analyzed, no female informants were interviewed in this study. One reason for this bias in data collection might be that there are fewer female programmers in the FOSS community. However, interviews with female programmers will give us first-hand data, which will provide more valuable details about how they engage in the creative process of the FOSS community and about how they think about their engagement. These details might help us better understand the gender hierarchy involved in the creative process of a consumer community which is ignored by the current marketing literature on consumer creativity, although gender hierarchy is an important topics in the area of consumer research (Hirschman 1993). Future research in the context of the FOSS community could interview female programmers to explore the gender hierarchy and related dynamics within the FOSS community more deeply.

Fourth, cross-cultural studies might bring some interesting insights about how cultural values influence the creative process of a consumer community as Mike suggested in our interview. A preliminary comparison was conducted and suggests that FOSS programmers in a collectivism-dominated culture seem to be more inclined to
avoid intra-community conflict and that the management style of the founder of a community might moderate the effect of dominating cultural values (e.g., individualism, collectivism) on the interaction modes of a community. For example, there is no flamewar in the archives of the Zeuux community which is embedded in the Chinese culture that is dominated by the value of collectivism. Sharing as well as tolerance is an extremely strong tacit value of this community. Community members share not only technological knowledge and skills but also knowledge and experiences on personal issues (e.g., health, learning English). Differently, I found flamewars were not unusual in several mailing lists of the Emacs and Debian communities, which is embedded in the American culture that is assumed to be dominated by the value of individualism. However, although many members of the Org-Mode community live in America and Europe, where the value of individualism is assumed to be stronger than the value of collectivism, both the founder and Levy told me that there was no flamewar in this community. The founder told me that he intentionally built a friendly culture in the Org-Mode community where people focused on sharing ideas with each other and avoided flamewars. The founder’s style of communication with fellow community members is very friendly and full of the sense of gratitude toward others. In fact, his communication style is a kind of standard communication style of the Org-Mode community.

This current study leaves the following questions unanswered: (1) in the context of a creative consumer community, how do national cultures affect individual community members’ inclinations to engage in conflicts and to share in their creative process? (2) How can the project management style of the founder or current leader of a creative consumer community affect the relationship between the national culture and the
interaction modes of community members? (3) What are possible positive and negative effects of avoiding conflicts on the creative process in the context of a consumer community? Future research needs to answer these questions because answering these questions would help us better understand the conflict and sharing behaviors in the creative process of a consumer community and because answers to these questions would have rich managerial implications. This research might be complemented by research that would study four FOSS project communities: two FOSS project communities in an individualistic culture with different frequencies of intra-community conflicts and two FOSS project communities in a collective culture with different frequencies of intra-community conflicts.

Finally, future research should explore how companies could better engage in a creative consumer community as authentic community members and what factors would help build or damage the perceived authenticity of corporate participants of a creative consumer community. Without deeper understanding of these factors, rushing to co-create with a creative consumer community might not bring all the benefits a company wants. For example, whereas Microsoft agreed to donate US$100,000 annually to the Apache project, Bruce Perens, who co-founded the Open Source Initiative with Eric Raymond, doubted Microsoft’s intention and described Microsoft as a “Wolf in Sheep's Clothing” in his online article on August 5, 2008 (available at: http://www.serverwatch.com/news/article.php/3763236/Microsoft--to-Feather--Nest-With-Apache.htm). This episode is a warning call in the trend of co-creation.
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