Consumption-Driven Market Emergence

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New market development is well theorized from a firm-centered perspective, but research has paid scant attention to the emergence of markets from consumption activity. The exceptions conceptualize market emergence as a product of consumer struggle against prevailing market logics. This study develops a model of consumption-driven market emergence in harmony with existing market offerings. Using ethnographic methods and actor-network theory the authors chronicle the emergence of a new market within the motorcycle industry that develops with neither active participation nor interference from mainstream industry players. Findings reveal a process of multiple translations wherein consumers mobilize human and nonhuman actors to co-constitute products, practices, and infrastructures. These drive the growth of interlinked communities of practice, which ultimately are translated into a fully functioning market. The study highlights the roles of distributed innovation and diffusion, embedded entrepreneurship, and market catalysts in processes of market change and development.

> The translation of intents into artifacts always escapes the control of their creators, in the same way that a text distances itself from, and acts beyond, its author. (Robichaud and Cooren 2013, xvi)

This article is about the translation of intent into artifact, but it is also about the translation of artifact into intent. Ultimately it is about the formation of a new market from the highly distributed and parallel actions of consumers on objects and the reciprocal actions of those objects on the same and other consumers. Through ethnographic fieldwork and actor-network theorizing, we demonstrate a process of consumption-driven market emergence (CDME) that sheds new light on the roles of consumption in market formation.

New market development research historically has occurred from within a firm-centric tradition. Given the profitability of growth markets and the potential advantages of being an early mover within them (Kerin, Varadarajan, and Peterson 1992; Lieberman and Montgomery 1988), it is no surprise that business disciplines have devoted research efforts to new market development. Most of it has focused on just two processes: innovation and its diffusion, in which consumers figure primarily as potential recipients of firm-driven innovation (Day and Kimberly 1995; Hauser, Tellis, and Griffin 2006; Rogers 1983; Van de Ven 1995).

Work in the consumer culture tradition recently has shown consumers to be more active participants in market dynamics. A few studies have examined contexts wherein consumers played key roles in market formation (Giesler 2008; Goulding and Saren 2007; Sandikci and Ger 2010; Thompson and Coskuner-Balli 2007). Without exception these studies conceptualize consumer roles as some form of rebellion or resistance to prevailing market logics or market-induced stigma. This raises the following questions: Can new markets form in the absence of significant resistance, conflict, or stigma? Is there another model whereby new markets can emerge from consumer activity in relative harmony with existing market logics? If so, what processes are involved? In answering these questions this study contributes to a more comprehensive picture of market formation, one that contrasts markedly with predominantly firm-driven models of market development.

CONSUMERS AND NEW MARKET FORMATION

Very few studies have recognized truly generative roles for consumers or consumption in the creation of new markets.

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The exceptions, in their particular foci, form only a partial picture. Kozinets (2002) examines consumers' attempts to emancipate themselves from institutional market logics in the performance of Burning Man, and he notes the temporal and local limits of such efforts. One might argue that Burning Man participants actually co-create an alternative temporary marketplace, complete with production, consumption, forms of exchange (although not monetization), and even a transitory supporting infrastructure. Thompson and Coskuner-Balli (2007) analyze community-supported agriculture (CSA) as a form of ethical production and consumption organized as resistance and remedy to commercial co-optation of organic agriculture by industrial farms. Although they do not present their research as a case of market emergence, it appears that CSA members participate with farmers in co-creating new market structures (Press and Arnould 2011). Because neither of these studies focuses directly on market formation, much about the actual processes falls outside their scope.

Goulding and Saren (2007) use a grounded theory approach to investigate and illustrate subcultural commodification in three stages: rebellion, fragmentation, and commodification. Growth in the rebellious subculture led to fragmentation into multiple forms and expressions, akin to a market segmenting itself. Commodification ultimately led to what Goulding and Saren describe as "a burgeoning retail and leisure industry" (235) serving the Goth subculture. Their study documents the emergence of a new market from consumer activity, but again it does so without fully examining the process of market formation.

Consumers in a study by Sandikci and Ger (2010) use fashion innovation to resist stigmatization as a result of existing market offerings and, in so doing, develop what the authors call a parallel taste structure. Eventually these consumer innovators develop a viable business opportunity and what may be, if not a new market, then certainly a new market segment. Scaraboto and Fischer (2013) note limitations to Sandikci and Ger's perspective, calling it "insufficient in a context where consumers want to be able to participate in the mainstream market without developing (or being relegated to) a parallel taste structure" (1235).

In his analysis of music downloading and file sharing, Giesler (2008) describes market evolution as a warlike "process of marketplace drama, a fourfold sequence of performed conflict between opposing groups of consumers and producers" (739). Interaction among music consumers, prosumer hackers, and the music recording industry took on a decidedly antagonistic character, and what emerged from the protracted battle was a new market infrastructure with new products, modes of music consumption, and models of pricing and distribution. Giesler's conflictual model and the other resistance-based logics of market formation help to form a picture of market dynamics that is potentially one-sided.

In contrast to studies of resistance, Scaraboto and Fischer (2013) study "frustrated fatshionistas" who seek to expand, not reject, the logics of an existing market in order to fulfill their desires to wear designer clothing. These authors observe that conceptual models based on resistance may be "less applicable in contexts where consumers would be delighted to make purchases from mainstream marketers if only options were available" (1235). The fatshionistas, as institutional entrepreneurs, are unsuccessful in bending the designer fashion industry to meet their needs. A new or substantially changed market never results. Is it only in resistance that consumers can generate the energy to drive the development of a new market? We demonstrate that there is another side to market dynamics in which consumers, similar to successful institutional entrepreneurs, not only seek to expand existing industry logics but also drive the formation of a new market within an existing industry.

To extend theory about consumption and market formation, we follow the admonition of Arnould, Price, and Moisio (2006) to work in a context that is likely to be fruitful—in this case an emerging market within and in harmony with an existing industry. We chose an industry in which we have a great deal of experience and prior understanding: motorcycles. The emerging market was minimoto, characterized by adults buying, modifying, riding and/or racing minibikes designed and manufactured for children. Minimoto was especially suitable for studying market dynamics for several reasons. First, when we encountered minimoto it was quite new and its participants had knowledge of its recent history and development. Second, those participants were primarily consumers rather than industry insiders. Third, minimoto developed without antagonism from or resistance to the mainstream motorcycle industry. Fourth, participants were not stigmatized; they had comfortable relations with the mainstream industry. And yet, as we explain later in detail, they worked at the edges of the industry to develop products, practices, and infrastructures that, while mirroring the mainstream, existed separately.

Among the main challenges of studying market dynamics is the need to be sensitive to both context and process. As Giesler (2008) explains, "processual understanding of how markets change requires the analysis of complex socioeconomic systems over time" (739). To this end we benefited from our prior prolonged engagement with the motorcycle industry. Scaraboto and Fischer (2013) cite the need for the analysis to be richly contextualized. Recognizing the limitations of blog post data, they call for researchers "to examine what other contextual dynamics in an organizational field might foster collective identity formation and communicative action among consumers that can mobilize them to see and to seek market changes they desire" (1251). To this end we chose ethnography, with emphasis on observation and interaction, as our method of field research. Finally, as Goulding and Saren (2007) observe and Sandikci and Ger (2010) underscore, a complete understanding of market dynamics requires attention to materiality. Products, innovations, infrastructures, market spaces, and exchanges, to name a few aspects of market dynamics, all have distinct material characters that are likely to reflect context and inflect process. For reasons we soon elaborate, to capture the

material side of market formation we ground our ethnography in actor-network theory (ANT).

ANT AND MARKETS

Answering the question "How does a market form?" requires first establishing that a market exists where previously it did not. This in turn requires a clear definition of a market. In our choice of a definition we recur to actor-network theorization. To make sense of the nature of markets from this perspective we first elaborate on ANT, what it is, and why it is appropriate for a study of market dynamics. Then we will define a market in ANT terms.

ANT is our chosen theoretical framework in this study of market formation, but it is not a theory per se. Rather, it is a constructivist (Latour 2005) ontological epistemology (Law 2004) for investigating and theorizing social phenomena. ANT was developed by sociologists of science and technology in order to account for the roles of materiality in social life, something that gets lost in a science that privileges cognition and social construction (Callon 1986; Latour 2005; Law 2004). Social constructionist theories locate agency entirely within human subjects and relegate nonhuman entities to object status. In contrast, "ANT argues that there is no purely material, just as there is no purely social, and this belief in their separation and separability is a modernist fiction" (Gille 2010, 1051). The core construct in ANT is the actor-network, understood as a heterogeneous assemblage of human, nonhuman, and hybrid actors. The assemblage is inherently unstable, constantly being performed through the interactions among various actors in concert or opposition (Callon 1986; Law 2008). The relations are generative and together may assemble, stabilize, or destabilize a network. A central tenet of ANT is that all actors, including nonhuman ones, have agency to the extent that they affect the actions of other actors (Latour 2005). For example, rules, standards, technologies, and infrastructures all exert shaping and limiting agency over human behaviors and practices.

ANT insists upon analytic symmetry in the agency of human and nonhuman actors (also called actants), assuming no asymmetric subject-object relations but, rather, focusing analysis on the relations between two subjects. Says Nimmo (2011), this "is not so much a case of theoretically inserting nonhuman actants into an otherwise human-centered story, but of refraining from imposing ontological categorisations a-priori, thereby allowing the heterogeneous relations and intermediations which are already present to emerge" (115). Unlike other approaches to materiality in social science, ANT scrupulously disciplines the gaze to recognize object agency, preventing an exaggerated account of human agency in a largely material and technological world.

Translation is another key construct in ANT. In one respect translations are simply transformations or movements of materials or meanings from one medium or space to another (Latour 2005). Translations result from the relations among actors, and actors are co-constituted in and by those relations. Callon (1986) also refers to translation more specifically as a process whereby one actor problematizes a situation and then mobilizes an actor-network to deal with it. Such intentional actors may set up obligatory points of passage for materials and/or communication within the emerging network in order to shape the assemblage in a particular way or manage it toward certain outcomes. Giesler (2012) makes use of Callon's theory of translation in his analysis of the Botox market, although without attention to obligatory points of passage or, it could be argued, the same attention to materiality that usually characterizes ANT analyses.

In ANT any given actor can be both a "black box" and an actor-network in its own right. For example, a marketing firm is an assemblage of human actors and nonhuman actants, such as technologies, spaces, and discourses that affect how the humans work and interact. That same organization can also be "black-boxed" analytically as an individual actor in a different assemblage such as a market. In an apparently paradoxical twist, ANT flattens hierarchies among actors. For example, we can analyze a firm as an actor within a market, which in turn is an actor within an economy; however it makes equal sense to treat the economy as one actor in the performance of a firm.

In summary, a market can be conceptualized as an actor-network comprising human, nonhuman, and hybrid actants, as can each of the actors within it. ANT would hold that a market is constantly emergent in the relations among actors and the many translations that give it form and stability. The same is true for each of the actor-networks that constitute that market. The potential for discovering infinitely nested actor-networks raises the question of scope and boundaries. At what point do you stop unpacking black boxes or quit proliferating actor networks? The answer resides in the constructivist nature of ANT. The scope of the phenomenon emerges empirically from the analysis and can be inferred from the density, direction, and vitality of the relations among actors.

What Is a Market?

Fligstein and Dauter (2007) summarize sociological approaches to markets as falling broadly into three camps—markets as networks, institutions, or performances—and emphasize that all three approaches treat markets as "social arenas where firms, their suppliers, customers, workers, and government interact, and all three approaches emphasize how the connectedness of social actors affects their behavior" (107). The emphasis on connections and interactions resonates with ANT except in its failure to account for the agency of material objects and infrastructures as actors in the social arena.

In their ANT-informed work on marketization, Caliskan and Callon (2010, 3) define markets as "sociotechnical arrangements or assemblages (agencements)" that "organize the conception, production and circulation of goods"; organize monetized exchanges; deploy "rules and conventions; technical devices; metrological systems; logistical infrastructures; texts, discourses and narratives; technical and scientific knowledge, as well as the competencies and skills

embodied in living beings"; and construct and delimit spaces wherein conflicts or competitive forces can be resolved through pricing mechanisms. A notable characteristic of this definition is that it speaks of the market less in terms of what it is than what it does. It is literally an actor. Not merely a metaphoric place or structure, it constitutes places and structures. It not only has supply chains, marketers, and customers; it co-creates them all.

Citing the need to study the material, processual, relational, and performative aspects of markets, many scholars have turned to ANT (Araujo, Finch, and Kjellberg 2010; Geiger, Kjellberg, and Spencer 2012). The history of ANT in consumer culture research is also recent but promising (Bajde 2013). Our study uses ANT in the consumer culture tradition to examine a case of an emerging market, uncover the socio-material relations and translations that led to its formation and stabilization, and thereby add to theory about consumers' roles in driving market emergence. This study fits within what Caliskan and Callon (2010) describe as the study of marketization, that is, "the entirety of efforts aimed at describing, analysing and making intelligible the shape, constitution and dynamics of a market socio-technical arrangement," including their "insistence on materialities and technicalities" and "taking into account the social sciences, as well as knowledge and skills developed by market agents themselves," which they describe as an "entirely under-studied field of research" (3). It also responds to Venkatesh and Peñaloza (2006), who call for a paradigm shift "from marketing to the *market*." These authors identified 17 conceptualizations of the market construct in scholarly literature, reminding us that "the market does not have a universal quality" (140), even though the marketing literature is highly skewed toward viewing markets as product markets or as sites for competing firms.

RESEARCH METHODS

Prolonged prior engagement as researchers in the motorcycle industry has instilled in us an understanding of and sensitivity to cultures and dynamics in the industry and its constituent markets (Martin, Schouten, and McAlexander 2006; Schouten and McAlexander 1995). In early 2005 we became aware of a new phenomenon in motorcycle racing called minimoto supercross (MMSX) and became intrigued by its potential as a context for studying market emergence (Arnould et al. 2006). We began our study, as Latour (2005) insists is inevitable, in medias res and worked forward and backward in assembling the story of the minimoto market. MMSX racing was our entry point to the market, but it was not the sole or even the primary focus of our attention.

To assist the reader we offer some explanation of the terms used in this market and our study. Supercross is a variation of motocross racing, conducted on an indoor dirt track with a large number of jumps and other obstacles. MMSX entails adults, primarily, racing minibikes on a supercross-style track. Minibikes, with engines originally displacing only 50–70 cubic centimeters (compared to 250 cubic centimeters or more for a standard motocross bike), are built for children. Although an adult can ride a child's minibike, it is an awkward proposition, and racing a minibike flat out on a track that includes jumps and obstacles generally results in the destruction of the machine. As a result, for minibikes to be raced successfully by adults requires major mechanical modifications. The term "minimoto" as we use it refers to the modified minibike. Another common term for the minimoto is "pit bike." Minibikes are also commonly called "fifties" for the usual displacement of their stock motors.

The first MMSX races were held in the Orleans Arena in Las Vegas, Nevada, in May 2004. Prior to the second annual MMSX event, we contacted the race promoter, Tim C. (age 55), at his home in Oregon. Tim offered to facilitate ethnographic research at the second MMSX event in May 2005, and he provided us with an all-access pass as well as introductions to other race officials and participants. This allowed us to move freely around the track, backstage areas such as the race-staff break room, vendor areas, and the racers' pit area for the purposes of observation and conducting interviews. In May 2006, we attended the third annual MMSX championship races as ethnographers, once again with all-access passes. In the interim year and subsequent to the 2006 race, we studied archival and online sources, such as *MiniMoto SX* magazine and various websites and conducted follow-up interviews. In February 2013, we interviewed three employees of a major multibrand motorcycle dealership, one in sales, one in parts and service, and one in customer financing. All were knowledgeable about the state of the minimoto market and its context within the broader US motorcycle market. The parts manager, Doug (age 26), also races minimotos, having experience in both Las Vegas and his home state of Ohio.

At MMSX 2005 and 2006, we interviewed race promoters, racers, their support teams, spectators, sponsors, parts suppliers, and both paid and volunteer members of the race promotion staff. Many interviews were informal, conversational, and unrecorded. We videotaped and partially transcribed formal interviews with key informants. Table 1 lists the informants with whom we conducted formal interviews. We interviewed co–race promoter Eric P. (age 53) and event staff in a break room where they congregated. We interviewed racers, support teams, and some members of sponsor organizations in the pit area where race teams gathered and socialized between practice heats and races. We interviewed parts and accessories suppliers in a dedicated merchandising area set up inside the arena. Interviews with racers in the pits ranged from 30 minutes to over an hour, depending on the practice schedule, and they often included accounts and demonstrations of minibike modifications. Interviews with Tim C. totaled more than 5 hours. With their permission, we identify certain promoters and professionals by name. To other informants, including amateur racers and volunteers, we assigned pseudonyms. Both of our MMSX promoter informants have lifelong histories of participation in motor sports. MMSX racers span a wide range of ages and include both men and women, although they are predominantly male.

All interviews were unstructured, but we used probes as necessary to elicit informants' histories with minimotos and

TABLE 1

KEY INFORMANTS

Informant	Age	Role
Tim C.	55	MMSX and *MinimotoSX* founder
Cindy C.	40s	Partner, MMSX and *MinimotoSX*
Eric P.	53	MMSX promoter
Kurt	34	Amateur racer
Derek	24	Amateur racer
Tony	53	Amateur racer
Mark	21	Amateur racer
Jessica	23	Amateur racer
Gretchen	33	Amateur racer
Benjie	22	Amateur racer
Ron	34	Amateur racer
Brian	39	Amateur racer
Guy C.	43	Former pro racer, minimoto importer
Preston	17	Stunt performer
Sandy	42	Spectator
Bill	40s	Spectator
Mike	16	Spectator, rider
Jeff	16	Spectator, rider
Nicholas	22	Spectator, rider
Jace	22	Spectator, rider
Dan	28	*MinimotoSX* editor, rider
Don	32	Former pro racer, minimoto importer
Ryan	56	Custom parts builder
Doug	26	Parts manager

to "interrogate" material aspects of their experiences. The latter we achieved through discussions with riders about practices such as the "how, where and with whom" aspects of riding "back home" or through tales and demonstrations of minibike modifications and performance. We also investigated relations among actors through observation. At MMSX events we observed both front- and backstage activities, including racer registrations, racers' preparations (including of minimotos and gear), socializing in the pit area (including material and spatial arrangements), race promotion and management activities and materials, practice heat races, spectator interactions, and the races themselves. In fall 2005, author Martin spent a full day at the Southern Oregon home of Tim C. and his wife and business partner, Cindy C. (age in the 40s). They related, in the course of leisurely interviews, a home-office tour, and the viewing of race and promotion videos, a more complete history of the MMSX races and the magazine, *MiniMoto SX*, which they founded and published.

FINDINGS

The Emergence of a Market

At MMSX, motorcyclists from all over the Western world had come to Las Vegas to race on minibikes they had modified with aftermarket parts and accessories. A common thread uniting them and distinguishing them from other motorcyclists was a desire to participate in dirt bike riding and racing in a way that was safe, affordable, widely accessible, and, above all, fun. A 2005 interview with the Brown family revealed much about the growing appeal of minimotos and was in many ways a microcosm of the development of the minimoto market. Bill and Sandy Brown (ages in the 40s) are the parents of Mike (age 18), who had been riding since he was age 13. With them was Mike's friend Jeff (age 18).

Interviewer: How did you get started?

Mike: My sister's boyfriend had [a minimoto]. . . . He looked like a bear on a roller skate. I was on a [full-sized] dirt bike.

Interviewer: And you?

Jeff: I never had a big bike. I rode Mike's [mini]. It was fun.

Sandy: What really appealed to them, they could do wheelies, endos. . . . With the big bikes you could only go out and ride. These you could have some *fun* on.

Bill: Now we built a track for them.

Mike: When you get on the little bike you felt you could do anything you want on it. It was slower at first. I didn't have anything on it. But after I got a bar kit it got easier to ride. On the stock bike . . .

Sandy: . . . knees hitting the handle bars and. . .

Jeff: . . . when you try and turn it . . .

Mike: We bought stock fifties. First we bought handlebars, higher seat, more power. . . . Now it's an 88cc.

Jeff: Some of these guys have 125ccs on a 50cc frame.

Mike: I'm turning it into a bigger bike so I have more control. Taller, more power, more room to throw your foot out, bigger footpegs so you can keep your feet on.

Sandy: Less chance of getting hurt. You can attempt to do some stunts you wouldn't do on your big bike.

Mike: We're not doing flips until we get the foam pit built. We're building that now, and ramps.

Jeff: Long term, it's a money pit. It's never done.

Mike: I'd like to ride a big bike, but I'll always have a mini. It's the funnest thing I've ever done. I'd take a mini over a big bike any day. I have more fun on the mini bike.

Jeff: You feel safe. You're not going to get thrown off. You feel like you have total control over it.

Sandy: When I see them out there on it, I don't worry. With the big bikes I was scared to death. They've wrecked pretty good on [minis], but they just get up and go.

Bill: False sense of security.

Mike: It makes it easier—to know that she isn't worried. . . . We live in Pueblo, Colorado, and you see them everywhere. The more people the better, the more parts available.

Interviewer: And the racing?

Jeff: Our racing is in the back yard, not competitive.

Mike: Five or six of us in the back yard, elbowing.

Jeff: You can talk to each other while riding. . .

Mike: Hang time off the jump, that's where the adrenaline is. On a little bike you can really hang. On a big bike you don't feel like you're up there that much. I was scared on a big bike.

Jeff: I've never rode a motorcycle in my life until I got the mini from [Mike]. And three or four people got it from me. And it was like a chain reaction. Bigger bikes are not for me. I'll always be on a mini. It's growing like crazy. . . . You get addicted to them. You have so much fun on them. . . . You're not successful right away. It takes practice. It took some time to feel comfortable, a month or so after I got my bike.

Key elements from the Brown family story include the following: the ability of the minimoto to deliver a unique form of adrenaline-filled fun; a relatively safe environment; low entry barriers; the need for owner-riders to modify and personalize their minibikes; the tendency to build consumption infrastructure, such as racetracks and jumps, for greater enjoyment of the minis; and the power of the activity of minimoto riding and racing to attract new riders and form the basis of local rider communities. As we will show, this basic pattern played out in widely dispersed geographical locations. Through online activities, local minimoto communities began to connect and form a larger metacommunity—by which we mean a broader, transnational set of electronically networked communities—sharing know-how, enthusiasm, stories, and material resources, or in a word, practices. The growing metacommunity of practice supported and was supported by entrepreneurial commerce in minibikes, parts, and accessories. Ultimately it became the basis for a market in minimotos that was attractive to major corporate investors. As we detail the emergence of the minimoto market, we attend to the agency of nonhuman and hybrid actors, and especially their roles as catalysts in the various translations leading to the formation and stabilization of the minimoto market.

Consumer Desires, Material Constraints, and the Minibike Solution

The driving actor behind the emergence of the minimoto market was the desire of adult consumers to ride or race dirt bikes, combined with the inability or unwillingness to do so on full-sized motorcycles. The desire was usually rooted in a previous history of dirt riding. For informant Tony (age 53) minimoto racing takes him back to his youth. He notes, "It's like being a kid again." Most of our informants grew up around motorcycles, perhaps even starting on minibikes or three-wheeled all-terrain vehicles. Brian (age 39) describes a common progression: "I started out on three-wheelers. Those got banned, so I went to big bikes and got into races. Then I got older and got a family and had less free time. Minis are a way to ride at home on my property . . . and it's probably the most addictive thing I've ever done." Like Jeff before, Brian speaks of addiction. Gretchen (age 33) also echoes the theme: "Riding is kind of like a disease; you can't just let it go."

Despite the strong desire to ride dirt bikes, many people have chosen not to participate because of the material constraints the activity entails. One of the most common actors on the would-be rider, as we learned from the Brown family interview, is fear of injury. Gretchen, having previously been injured on a bigger bike, also mentions the problem: "I have other things I need to get done"—meaning that she can't afford to be laid up with an injury. Minis, however, mitigate that constraint. Jace (age 22) remarks: "You can do whatever you want and not really get hurt." Guy C. (age 43), a professional racer turned minimoto importer, felt that reduced risk is a democratizer that potentially expands the motorcycle market: "With less danger of minis liability for the sport is lessened."

In a remark quoted above Brian cited family life and a lack of free time as his reason to quit riding dirt bikes, a constraint minimotos also mitigate. Other material constraints reported by informants included money, space, and transportation. Big bikes are expensive to buy and maintain. Transporting one requires a truck or trailer, and suitable riding venues tend to lie at considerable distances from population centers. The latter problem has been exacerbated by regulatory pressures on the amount of public land available for off-road riding (Pike 2011).

Minimotos neutralize all these constraining actors. Regarding price, Nick (age in the 20s) tells the story of how he and five friends got together one day in Mississippi and all bought minibikes for about $1,000 each: "$6,000 equals 6 minis . . . enough to have some serious fun." Regarding transport, a mini can be hauled in the trunk of a car or the back of a family van or SUV. One race participant sent his bike to the United States from the United Kingdom in his checked baggage. A group of Hawaiian riders used plastic storage bins to FedEx their bikes from Maui to Las Vegas. The bins then served as ad hoc seating for socializing in the race pits. Storage and parking are less problematic with minibikes. We heard about minis sneaked into hotel rooms and garaged in college dorms. Benji (age 22), from the United Kingdom, regularly parks his mini in his mom's kitchen, at least until her patience is exhausted.

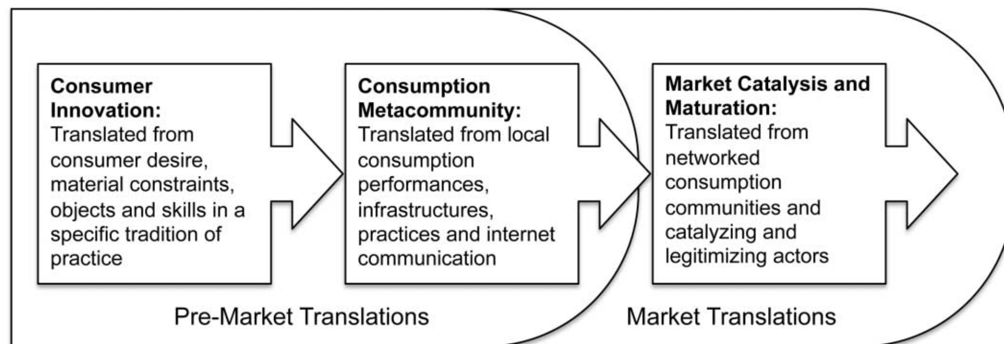
The stage for the emergence of a new sport, MMSX, was set by the combination of consumer desires and the material actants opposing them. Minibikes emerged as a resolution to the thwarted agency of would-be dirt riders. Minis did not, however, in their stock form meet the needs of adult riders. The adult-friendly minimoto and the market built up around it were assemblages that resulted from a series of translations, as illustrated in figure 1. Although many relations in the emergence of an actor-network evolve more or less simultaneously, we observed a general chronological sequence of translations generating a series of growing, morphing, and interconnecting actor-networks that became more and more market-like in their overall manifestation. We take them in that rough chronological order.

First-Stage Translations: The Emergence of the Adult Minimoto Rider

The minimoto is a heterogeneous grouping of manufactured parts and fluids resulting from translations involving the fol-

FIGURE 1

MARKET EMERGENCE: STAGES OF TRANSLATION



lowing actors: (1) minibikes designed and built for children, (2) consumer innovators with particular motivations, skills, and circumstances, and (3) a wide range of tools and materials. Tim C. summarized the general translation process: "Adults took these little fifties that they bought for the kids and kinda got in the corner of the garage with spider webs on them. . . . They dust them off, they put on a little bit bigger set of handlebars, a little stiffer spring and all of the sudden it takes off." Said Dan (age 28), a former minimoto blogger and editor of *Minimoto SX*: "When this thing first came underway, the only way to really build an adult-oriented pit bike was to take a stock Honda and piece it together." Ryan, a 56-year-old former racer, is a consumer innovator. Ryan began experimenting with and modifying minibikes for his own use in the 1990s, eventually building race minis for his teenage daughters and turning his Southern Oregon shop into a center of activity for minimoto enthusiasts.

True to Callon's model of translation, the process typically began with a consumer problematizing a situation: how to ride or race dirt bikes in the face of the already mentioned constraints. Into this problematized situation enters the minibike, a nonhuman actor that to the innovator suggests a potential solution: a dirt bike that is cheap, easy to store and transport, and safe to ride. Minis, however, also pose new problems. First, they actively resist being ridden by an adult. Recall the Brown family interview and the difficulties of riding and turning a mini with stock handlebars. Second, they do not stand up to hard riding by an adult. Motorcycle journalist Brian Korfhage (2005, 1) writes: "Without the necessary hop-up components, we'd still be riding clapped out [minis] and replacing them every two or three races. . . . A bike with increased displacement and true suspension modifications are an absolute necessity if you want to be competitive on the track." But because adults riding minis were a relatively new phenomenon the necessary "hop-up" components initially did not exist. The early consumer innovators had to fabricate them or find someone who could. In terms of translation, the consumer innovators organized and mobilized available human resources (knowledge and skills) and nonhuman resources (minis, materials and tools), acting as obligatory passage points or organizing forces, until the adult-ready minimotos came together and performed as desired.

As an agentic actor, the minimoto provides the rider with fun, and lots of it; hence, the previous comparisons to an addictive substance. From Doug we learn that minimotos exert their agency in other ways relevant to a market. They require frequent parts and maintenance, they beg for performance modifications, and if raced they demand repairs. He says, "My 184 motor went through transmissions left and right because certain parts they don't make *strong*. . . . I mean it's like a full race bike at that point. You gotta maintain it *all the time*."

Amabile (1996) notes that passion and intrinsic motivation are driving forces for creativity, and Moreau and Dahl (2005) demonstrate that imposing constraints actually heightens and channels innovation and problem solving. Into a milieu of consumer desires and material constraints the child's minibike asserts itself as an actor that prompts an idea. The consumer innovator, a true prosumer in the manner conceived by Toffler (1980), responds by mobilizing resources to create the minimoto. The minimoto as an actor delivers pleasure and makes material demands. In conjunction with its rider it forms a new human-technology assemblage, the adult minimoto rider. The agency inherent in that assemblage leads to a new set of translations, which we now address.

Second-Stage Translations: Assembling Community

The adult minimoto assemblage becomes a powerful actor in a broader social context. In addition to consuming fun in big doses, the rider performs fun for others, spreading desire, attracting other potential riders, and acting as a catalyst for the formation of a community of practice. The relatively low purchase price of a minibike makes the fun accessible for people who could not or would not afford the

high costs of standard dirt bike racing. As mentioned previously, for Nick and his five friends, the low entry barrier allowed them to create an instant riding community, and as Jeff related, the act of riding publicly creates a "chain reaction" of new owner-riders.

The minimoto rider prompts another kind of translation, the construction of a local track, an assemblage that enhances minimoto performances and experience and becomes a gathering place for community. Most of the local tracks we heard about were noncommercial adaptations of backyards, pastures, or tracts of woods. As noted previously, Bill built a track for his son Mike and his friends. Nick and his friends raced on a local BMX track designed for bicyclists. Informants Gary, Ryan, Kurt, and Tony all mentioned the importance to them of local tracks, and a browse of minimoto-related websites and forums turns up video evidence of the same.

Local tracks act as magnets for enthusiasts to ride, socialize, and learn from each other. Shared social practices develop. Guy refers to local competitions as "banging bars, having a great time." As Brian relates, "Someone will start calling around and before you know it we're riding, having barbeque and having fun." Don (age 32) says, "The younger riders include me . . . they call me when they're riding and I fit right in." An all-Hawaiian contingent of racers discussed their local rides and races, and Kurt specifically mentioned a group of "minor outlaws," four women who ride their minibikes on full-moon nights on local golf courses despite prohibitions against it. He is very clear that all the mini riders on the island are friends who know each other's routines.

Minimoto communality transforms some families. Ryan has two daughters for whom he built race-worthy minis. At MMSX he functions as their mechanic, mentor, and cheerleader, operating from a trailer that serves as both lodging and garage. Ryan, his daughters, their minimotos, and their racing accoutrements formed an actor-network that was inherently stable and recognizable as a family that races. Ron (age 34), another minimoto dad, moved to a mini from a full-sized bike in order to ride alongside his 6- and 9-year-old sons. He says, "I don't go on a ride without them. Motorcycles are my passion and I'm lucky enough to do my passion through them." Tony (age 53) was introduced to minis by his son, and now they ride together routinely on their own acreage.

The need for minis to be modified puts a premium on the knowledge and skills of consumer innovators such as Ryan, who has an engineering background. Some innovators see this as an opportunity for entrepreneurship. One such innovator is Dan Hanebrink (Fortune Hanebrink 2012), a NASA engineer and avid bicyclist, who has fabricated and sold products such as frame stiffeners, forks, and swing arms for minibikes. People with expertise to share or parts to sell began to reach out through the Internet. Blogs and forums proliferated. Informant Dan was an early blogger, chronicling his own experiences modifying and riding minis prior to 2004 when he was hired to edit *MiniMoto SX*. A cursory web search reveals online minimoto groups and businesses around the globe, and this does not begin to account for the ones that have come and gone in the past several years. Most commerce in minimoto parts and accessories is Internet based. Says Doug in 2013, "One of my friends back East, he, like, owns an Internet website, and he's the one I've kinda been getting parts from, and some info from." The fact that Doug, as a parts manager for a dealer that carries minibikes from Honda and other companies, sources parts for his minimotos online indicates a market operating in parallel to the infrastructure of the mainstream motorcycle industry.

Another kind of entrepreneurship also emerged from within the growing minimoto community. Both Guy and Don began importing from China minis made to adult-rider specifications (Xtreme and Thumpstar brands, respectively). Chinese ready-to-ride minimotos lowered the price barrier even further for people desiring to try out the sport. Guy and Don, who both had long histories in motorcycle racing, operated within a space that was uncontested by the major players in the motorcycle industry. Said Don, "If Honda wanted to bring out a . . . totally tricked out pit bike they'd blow us all out of the water because it would be completely the best bike. They've got the dealer network and the financing and the everything. Why don't Honda want to do it? (*Shrugs*) It's fine with me." Doug, from his position in the mainstream motorcycle industry, explains the reason: "Even though (minimotos) took off, the amount of people weren't even, like, a percent of the riders of the world." Even though the minimoto community was developing critical mass as a market niche, it was not sufficiently attractive to motivate major industry players to participate in any way beyond continuing to supply stock minibikes. One consequence was that the well-developed infrastructure of the mainstream motorcycle industry was largely unavailable to the minimoto community.

The second-stage translations that gave rise to the minimoto metacommunity differed from the first-stage translations in interesting ways. The creation of minimotos was engineered or managed by consumer innovators in the fashion theorized by Callon, but the emergence of local minimoto communities occurred more organically, driven by the performances of lead minimoto riders in dispersed geographic locations. The early riders functioned as catalysts for change, or carriers of practice (Schatzki 1996), within their local communities.

Online activity indicated that local rider communities had emerged more or less contemporaneously prior to 2004 in many different locations in Europe, Australia, and North America. They developed similar practices, which mirrored practices in the realm of standard dirt bike riding and racing. As Bourdieu (1998) argues, habitus and the practices it reproduces are enacted and challenged by people that are "active, knowing agents endowed with . . . schemes of action which orient the perception of the situation and the appropriate response" (25). The consumers modifying minibikes operated from within a particular consumption tradition, and

the solutions they created retained a consistency of style and practice framed by that tradition.

By 2004, the year of the first MMSX, the popularity of minimoto was moving toward more mainstream motorcycle practice and media. In 2004, *MotorcycleUSA* President Don Becklin got his magazine employees involved in minimoto design and building.

> Don had a story idea, and a good one. . . . Take four Honda (minibikes) and hop them up to make mini rippers out of them! The office went from work environment to Romper Room in a matter of seconds, with grown men jumping around and laughing maniacally. . . . The plan was simple; divide the company into four groups representing various departments of *MotorcycleUSA*. . . . Each team would receive a (stock minibike) and $2,000 to hop it up any way they saw fit. When all the teams completed their modifications, the bikes would be judged on performance, appearance, and ridability on a mini track. (Korfhage 2004)

It was a classic act of translation: problematize a goal, then select and mobilize the necessary actors. The resulting assemblages included four minimotos, four different group narratives, and one magazine story with the potential to act on the imaginations of many other actual and potential minimoto enthusiasts.

Local rider communities continued to spring up throughout the Western world, each to some degree united by shared practices around a local riding venue, and the local communities were becoming linked through Internet communication and commerce. Thomas, Price, and Schau (2013) find that when consumers depend on each other for resources, they develop frame alignment practices that enable consumption communities to stabilize and reproduce. In the minimoto case, resource dependencies were key to the emergence of a metacommunity of practice. As we have shown, minimoto enthusiasts, inadequately supported by the mainstream motorcycle industry, relied on an Internet-mediated web of entrepreneurs and other riders for the material, cognitive, and social resources they needed to pursue their passions. As an actor-network, the metacommunity was large and fairly stable but lacked the obligatory passage points (Callon 1986) that might facilitate managing it or harnessing its overall potential to act.

Third-Stage Translations: Catalyzing and Legitimizing the Market

In 2004 an actor-network spanning multiple continents had formed among consumer innovators, riders, specific materials, designs, practices, consumption narratives, and on- and offline commerce. As a market it was characterized by a lack of efficiencies and professionalism, limiting its potential to generate profits and, perhaps, to fully satisfy the desires of a growing community. Into this network came a new actor, Tim C., a serial entrepreneur with a history that combined marketing, publishing, tourism promotion, and motorcycling. Tim was well positioned to see commercial opportunity in minimotos. He recalls: "I realized that the mini market had tremendous potential because it was made up of a number of cottage industries . . . several dozen." As Dan described the situation, "People had websites and catalogs and so forth. Call up and get a catalog. . . . It was still kinda scattered about. There wasn't one source. None of the major magazines were covering it." Tim C. problematized the situation like this: minimoto enthusiasts had no single, reliable place to go for information about how and with what to modify their minibikes, to find inspirational stories, or to read about other riders' exploits. As for the many cottage industries manufacturing after-market parts, they had no place to advertise apart from general dirt bike magazines, which were prohibitively expensive media buys and inefficient at reaching the small minimoto segment of dirt riders.

Mobilizing their own financial, material, and human resources, Tim and Cindy C. launched *Minimoto SX* magazine in glossy format in 2004. Leveraging personal relationships, they got it inserted into the industry publication *Motorcycle Product News* just days before it was distributed at a major Las Vegas motorcycle show. *Minimoto SX* debuted to a hungry readership and became instantly popular among enthusiasts. Said Dan: "The magazine was the first one . . . the only one that was out there. Everyone who made a pit bike wanted to be in it." As a publication it maintained a close relationship with its fan base:

> We give (our customers) everything they ask for. . . . "Can you give us more how-to articles on this?" "Can you give us more opinion of how things work and operate?" "Can you give us more options on where to go and find products?" What is so great about our magazine right now is that it is so new, that people don't even know who makes tires for minibikes. And I'm going to the advertisers saying "Hello! If you advertise, people are going to find you!" (Tim C.)

Minimoto SX entered the minimoto market as a new assemblage and black-box actor, becoming a preferred (not obligatory, as in Callon's model) point of passage for the metacommunity. The magazine organized information flows much more efficiently than they had been online, adding an important piece of infrastructure to the emerging market.

The success of the magazine and Tim C.'s nose for opportunity led to a second venture. In Cindy's words: "Some of the subscribers said, we need to have a race. That was how it happened." In this case problematization was itself influenced by multiple actors within the network. Tim and Cindy's motivation for staging a race was twofold. First was the expressed desire of backyard racers for a larger, organized event. The second was to provide added value to advertisers in the magazine. Regarding the latter, Tim echoed a well-worn dictum of the industry: "What wins on Sunday sells on Monday." He identified and mobilized a large, heterogeneous assortment of actors—personal contacts (including race promoter Eric P., friends, and family), an existing motorcycle race with a built-in fan base, track-construction experts, *MiniMoto SX* magazine, potential sponsors, celebrity motocross racers, and the American Motorcyclist Association (an official race sanc-

tioning body)—to create and promote a race. They staged the first MMSX in 2004 in Las Vegas on the eve of the national supercross championships in the same city. Years later, motorcycle journalist Carson Brown (2011) referred back to that first race:

> It's almost MiniMoto SX time again! Hard to believe this is the eighth year. Before MiniMoto started, there were backyard races going on all over the world. It seemed like every town had some legendary backyard race going on. It was only a matter of time before pit bike racing hit the big time and it happened in 2004 with the first MiniMoto SX. It has sold out every year and always provides some great racing.

The first MMSX drew sufficient racers and spectators to garner impressive coverage in the mainstream motorcycle press, to break even financially for the organizers, and to ensure a repeat performance.

As a new actor in the network, the race served to strengthen the minimoto community and further consolidate, stabilize, and legitimize the minimoto market. The race's agency manifested in part by assembling and temporarily concentrating a large variety of other actors, including amateur racers with their families and gear; professional racers and their gear; vendors of pit bikes, parts, and accessories; race spectators and volunteer workers; race pits; a schedule and organization; rules and regulations; the track and arena; and formal and informal communications, all of which combined to produce a multitude of individual and shared experiences.

The structure of the race pits was especially important in strengthening the community. The fenced-in pit area gave the impression of an agglomeration of encampments, each one pertaining to a particular family or clan, similar to the college football tailgating environments studied by Sherry and Bradford (2011). This quasi-tribal organization has roots in the pragmatics of stuff, once again illustrating the centrality of objects. At the center of each camp sits the trailer or trailers where the race team spends the night; stores, maintains, and shows off its bikes when not racing (which is most of the time); and eats its meals. Members of race teams tend to hang around their camps, relaxing on lawn chairs or makeshift furnishings such as ice chests or storage containers. Competitors and their support teams socialize freely, and the atmosphere is inclusive. As Mark (age 21) said, "You can walk around here and strike up a conversation with anybody." Our own observations bore this out.

Adding to the impact of the MMSX races on the emerging minimoto market were deliberate attempts to legitimize the races as something more than just a novelty. MMSX achieved legitimacy in several ways. First, the promoters applied for and received official sanction for the races from the American Motorcyclist Association (AMA). Tim C. says: "The first year we did this, we realized to be serious, for anyone—I mean the OEMs, Yamaha, and others—for anyone to recognize us as a serious entity we have to be AMA sanctioned. We're the first AMA minibike race in the world." AMA sanction means that promoters can award an official "No. 1 plate," designating a national or world champion, depending on the level of the race. Sanctioned, organized competition not only legitimizes minimoto racing; it also supports the market for bikes, parts, and accessories. As we learned from many different interviews, competition is an actor that ensures constant translation in the form of performance modifications and repairs.

Another legitimation strategy was to involve celebrity-class racers from the world of regular motocross and supercross racing. Carson Brown (2011) lists some of the dirt-bike luminaries that have competed in MiniMoto SX: "Everyone from McGrath, Stanton, Pingree, Lawrence, Pastrana, Metzger, and Costella have all made this race legendary." When Jeremy McGrath raced in the 2005 MMSX, he raced against amateurs in the same class. As we learned from informal interviews during race registration, part of the draw for some riders was the possibility of racing against and possibly even beating an idol of motorcycle racing.

As MMSX grew in popularity and size, segmentation occurred in the form of competitive classes. Unlike in the beginning, there are now separate classes for pros and amateurs—with cash prizes for the former—and for different minibike sizes and configurations. Altogether there are 10 classes for adults, including an over-35 group, as well as three newer classes for youth aged 13–17. The need to delineate race classes has had the effect of increasing regulations and governance. To compete in any class requires adherence to rules regarding an impressive range of minibike specifications and modifications. Multiple classes promote multiple-bike ownership, allowing a single racer to compete in multiple races. Says Doug, "I've got a couple of friends I've met through the shop. . . . This one kid . . . he has, like, frickin' *ten* pit bikes, and they're all, like, *nice*." It turns out the friend is a racer with corporate sponsors.

By 2006, the third year of MMSX, the market for minimotos was well established, with a growing customer base and a market infrastructure that included a whole range of manufacturers, standardized products, a stable supply chain, branding, and dedicated media. Product lines were being extended in recognition of increasing market segmentation. Says Don of the United Kingdom's Thumpstar: "We only had one bike last year and now we have five. We can't do one bike for all people."

Concerns about price competition in the category of race-ready minimotos also signaled maturation of the market. Says Don: "It's very simple to import a bike from China for not very much money and flog it for not very much money on the Internet or through magazines." He goes on to express concerns over quality and the overall reputation of the industry when cheap products fail to perform. Dan counters that increasing consumer knowledge is already correcting the problem: "People are getting pretty educated about it, and now they know you get what you pay for." Some of the current companies in the minimoto market have long-standing reputations for quality and competition in racing. BBR Motorsports, for example, in business since the 1970s and the builders of many championship-winning motorcycles and muscle cars, has swung a major part of its business into manufacturing specialty parts for minibikes. Mainstream motorcycle brands have also responded, not

with adult-ready minimotos but rather with branded performance parts. Product reviewer Coatney (2005) writes: "(Yamaha) realized that something like half of these bikes will be purchased by adults. . . . With that in mind, Yamaha's GYTR (a performance accessories division) . . . created just about every part anyone could desire to primp, personalize, and pump up their pit racer and make it fit them better."

The relative stability and maturity of the minimoto market was underscored by the interest and investment of corporate sponsors for the race event, for race teams, and for individual racers. Sponsors at the 2006 MMSX included numerous companies, both motorcycle-related and not. Monster Energy, Maxxis Tires, TCS, Two Brothers, N-style, Marzocchi, Utopia Optics, Billetwear, O'Neal, Tag Metals, Dunlop, Spaz Out Ink, Wheelspin, and Podium Productions all had financial stakes in the races. In 2012, MMSX, a thriving brand in its own right, bears the name of a major corporate sponsor, GEICO. In addition, more than two dozen other corporate sponsors sport names and logos on the MMSX home page. Adult-ready minibikes are available from several companies, including Pitster Pro, SSR Motorsports, Piranha, G2 Moto, Pit Pro, and Thumpstar. Kawasaki has joined as a sponsor of MMSX, which still draws racers from all over the world and is cross-promoted with endurocross and supercross races (Lovell 2012). In ANT terms, a mature market is an actor-network that has stabilized. Individual actors, such as customers, sponsors, and brands, come and go, and relationships shift and change, but the assemblage persists with a life, an identity, and a logic of its own.

Returning to the definition of a market by Caliskan and Callon (2010), we now establish in a point-by-point analysis that the minimoto market meets the qualifications. It is a heterogeneous sociotechnical arrangement of actors that are human (e.g., individual minimoto customers, innovators, marketers, and spectators), nonhuman (e.g., minibikes, parts, tracks and brands), and hybrid (e.g., manufacturing and retailing institutions with their attendant supply chains). It organizes the conception (e.g., minimoto innovation), production (e.g., modification and manufacture), and circulation (e.g., sales and distribution) of goods. It organizes monetized exchanges (e.g., sales of bikes, merchandise, and tickets). It deploys rules (e.g., MMSX regulations for race classes), conventions (e.g., modes of riding and socializing), technical devices (e.g., tools), metrological systems (e.g., race time-keeping and engine-size measures), logistical infrastructures (e.g., Internet stores and shipping), texts, discourses, narratives, and technical knowledge (e.g., minimoto blogs, forums, websites, and magazine articles), and embodies competencies and skills (e.g., building, repairing, and racing minis). It constructs and delimits market spaces (e.g., MMSX vendor areas and online stores) and facilitates price setting (e.g., price competition among importers and e-tailers). By these standards, minimoto is a market. Because definitions of markets and levels of analysis differ, it may be debatable whether minimoto is a market or a segment of the motorcycle market. The facts that (1) mainstream motorcycle companies do not treat it as a viable segment and (2) it has separate marketing infrastructures and institutions support our view. In either case, its emergence as a market entity has allowed us to study an undertheorized side of market development.

DISCUSSION

We have discovered and described a model of consumption-driven market emergence as a series of translations among human, nonhuman, and hybrid actors. In so doing we have shown that, in contrast to possible inference from previous consumer research, resistance to existing market logics is not a prerequisite for new market formation. The minimoto market was not created by any centralized actions of firms or managers. It emerged into existence largely through the highly distributed and parallel actions of consumers on objects and the reciprocal actions of those objects on the same and other consumers.

In this section we elaborate our model of CDME and introduce three concepts—each a form of market translation—that help to further explain the process: distributed innovation and diffusion, embedded entrepreneurship, and market catalysis. Next, we discuss our findings as they inflect and expand consumer culture theory on market dynamics as well as the broader literature on market development. We reflect on the use of ANT in the study of market dynamics and close with limitations and recommendations for future research.

A Process of Consumption-Driven Market Emergence

The CDME process entailed three distinct sets of translations that occurred, and that we contend had to occur, in a particular order. The first-stage translations produced variations of an innovation, the minimoto, without which second-stage translations could not have happened. It is interesting to note that the minimoto solution appears to have occurred more or less contemporaneously in many different locations in a process of distributed innovation, which is more commonly associated with open-source technology development (Kogut and Metiu 2001). The second-stage translations organized local minimoto communities and a metacommunity, within which developed most of the necessary actors to constitute a market, namely, consumers, producers, products, marketers, and practices. The concurrent formation of multiple, geographically diverse communities developed as consumers acquired minimotos in a process of distributed diffusion, the spread of adoption through multiple local communities. The minimoto market was fully realized only after the third-stage translations: the catalytic and legitimizing effects of two intervening actor-networks, a magazine and a race event. There exists compelling evidence that the market could not have formed without the prior, consumption-driven creation of the minimoto bike and the minimoto metacommunity. The usual suspects of market development, major industry firms, were inactive in this consumption field. Throughout the emergence of the market, and to this day, no major motorcycle manufacturer has stepped up to create a minimoto suitable for adult riding and racing. As we subsequently learned from industry insiders, the standard model of firm-

driven innovation and market creation was prevented from the outset by the unattractive economics of serving such a small market niche.

In the first-stage translation, the human actors that embody the desire, skills, creativity, and access to resources necessary to innovate function as embedded entrepreneurs. In the manner of embeddedness described by Polanyi (1944), their economic activity is part and parcel of their noneconomic pursuits. For Granovetter (1985), embeddedness is a key facilitator in markets because it fosters trust between buyers and sellers. We observed that embeddedness in the tradition of dirt bike racing yields embodied social capital (Bourdieu 1986) or subcultural capital (Thornton 1996), which grants the entrepreneur privileged insight into possibilities for solving problems or meeting needs within that consumption field. Ryan was an entrepreneur whose skills and situation led him to design and fabricate parts necessary for minimoto conversions, to build competitive minimotos, and to become a central figure in minimoto in Southern Oregon. Tim C. was also an embedded entrepreneur, but his insights and energy were not directed at product innovations per se. Instead, he developed two new institutions that would launch the minimoto community into a new realm of commercial possibility.

Embedded entrepreneurs bear some resemblance to the institutional entrepreneurs identified by Scaraboto and Fischer (2013). This study responds to their call:

> We need to understand the circumstances under which individual consumers can effectively become institutional entrepreneurs and inspire other consumers who identify with them. We speculate that this occurs when individual consumers can accumulate symbolic capital within the organizational field and when they use this capital to exert symbolic power in an attempt to change a field. (1251)

The embedded entrepreneurs in minimoto clearly inspired others to join ranks, and symbolic capital was a part of their influence. In addition to symbolic capital, however, they commanded other kinds of field-specific capital, including knowledge, skills, and material resources, which allowed them to co-create the material infrastructures of a new market.

Certain assemblages have the power to act as market catalysts, which we define as actors that channel existing potential in a network so as to reorganize the network into a more stable configuration. Like seed crystals in a saturated solution, a market catalyst provides an organizing logic and structure that creates stability in a number of ways: (1) it may resolve obstacles to more stable relations; (2) it may create greater efficiencies among network relations; or (3) it may temporarily increase the density of actors in the network, generating a greater frequency or different types of interactions.

The potentiality in the first-stage translations of the minimoto market lay in the consumer innovators' desires to ride dirt bikes, material constraints to doing so, material resources, knowledge, and skills. The catalyst was the minibike. It planted the idea that led to the mobilization of actors necessary to resolve obstacles to consumption. The resulting assemblage, the adult minimoto rider, then catalyzed community formation among other consumers with similar desires and constraints by removing obstacles and providing pathways to consumption. Nascent local communities were strengthened further by the organizing infrastructures of local tracks.

The introductions of the magazine and the race catalyzed a loose metacommunity of minimoto enthusiasts into a fully functioning market by channeling existing potential in ways that created efficiencies and increased densities of people and information. These actors gave the community a name and an identity around which enthusiasts rallied. MMSX created predictable spaces for producers and consumers to meet and conduct business. Together the magazine and the race became clearinghouses for market information. In ANT terms, they became privileged (again, not obligatory) points of passage for market actors. Advertisers found affordable ad space in a highly targeted vehicle. Manufacturers could count on the race to unite a critical mass of lead customers to view and perhaps buy or endorse their products. A dedicated vendor area at MMSX created a literal market space. Mingling among the vendors and customers, we observed a classic trade-show atmosphere. Not much money was changing hands, but, consistent with Granovetter's (1973) description of network formation, information was flowing energetically and people appeared to be building or reinforcing relations.

In her study of the emergence of the casino gambling industry in the United States, Humphreys (2010b, 491) finds that "the establishment of physical reality, such as the construction of buildings or the manufacture of products—adds legitimacy to a consumer practice." We would add that the physical reality also exerts agency that changes practices and co-constitutes a different consumer. The gambler in a Las Vegas casino is not the same gambler that plays poker in a buddy's den, nor is the game the same in terms of its stakes or dynamics. By concentrating gamblers and materially channeling their activities, casinos may well have been market catalysts for the gambling industry.

The robustness of such catalytic actor-networks is evident in the fact that both MMSX and the magazine survived and continued to exert influence in the minimoto market after Tim and Cindy C. sold them and retired from active involvement. The continued evolution of both the race and the magazine is testament to the ability of actor-networks to reinvent themselves, self-stabilize, learn, and embody and reproduce practices. We now discuss what our findings mean in terms of their contribution to a theory of market formation.

CDME and Market Development

On a continuum of models of market development based on the relative importance of firms versus consumers, we find one end anchored by purely firm-driven models in the tradition of neoclassical economics (Bass 1969; Rogers 1983; Schumpeter 1942/1975; Van de Ven 1995). Moving toward greater recognition of the importance of consumers, we find models that consider consumers as contributors to firm-led innovation (Baldwin, Hienerth, and von Hippel 2006; Cova

and Dalli 2009; Rindfleisch and Moorman 2001; Urban and Hauser 1993; von Hippel 1986, 2005). Farther along, we find models that view markets as socially constructed but that focus on institutional actors engaging in competitive exchange activities. According to Fligstein and Dauter (2007), "The social structuring of markets is generally in response to the problems of competition and exchange" (117). They conclude that a "fruitful dialogue is needed between those who favor a more cultural approach to consumers that focuses on the moral and social uses of products and those who favor an approach that stresses solving the problems of competition for producers" (119). Humphreys (2010a) enters this dialogue by invoking Kotler's (1986) concept of megamarketing to argue that the creation of new markets is a cultural, political, and social process, requiring stakeholder framing to achieve legitimation. Humphreys's institutional approach moves away from strictly firm-driven market development (FDMD) in acknowledging the importance of other stakeholders, including media and public policy actors, which play a pivotal role in the legitimation of an entire industry.

Closer still to a consumption-driven model is Giesler's (2008) model of conflict and compromise, in which activist consumers do battle with a hegemonic industry using weapons devised by hacker-entrepreneurs and thereby force the industry to counter and adapt. Goulding and Saren's (2007) study of subculture commodification among Goths portrays an example of CDME with striking similarities to the minimoto case. With a sharper focus on materiality than most of the preceding studies, Goulding and Saren find consumer innovation, community growth, and entrepreneurial activities that begin within the consumption community and lead eventually to "a culture of consumption which has moved beyond individual creativity to a two-sided system of production and consumption" (236). They even allude to a market catalyst without going so far as to define it or explain its mechanism.

If we compare the models of FDMD (firm-driven market development) and CDME, we discover some striking differences that should interest both market theorists and marketing practitioners. Table 2 lists the important distinctions. In brief, firms seeking to develop new markets through innovation have to invest heavily in research and development, production, and marketing, and they must shoulder the risk of a market failure, which is all too likely. Through CDME, the tasks and the costs of innovation are distributed and incremental. The adoption of innovations is also distributed and occurs in communities of practice that provide support for the products and their usage. The communities of practice are robust, and the entire network of communities develops with a high level of resiliency as compared to the precariousness of the firm-driven actor-network. In CDME, investment never gets too far in front of demonstrations of successful product adoption and consumption. We believe that this understanding of CDME has broad-ranging implications for our understanding of markets, of innovation and entrepreneurship, and of business models such as causal versus effectual approaches to market development (Sarasvathy 2001).

Callon's pioneering research on translations in actor-networks reveals limitations of firm-driven efforts to create markets or industry infrastructures. In studies of researchers attempting to restore a scallop fishery (Callon 1986) and efforts by French electrical engineers to develop an electric car (Callon 1987), he explains how both purposefully engineered actor-networks became tenuous propositions in which the lack of compliance among any set of actors would, and ultimately did, doom the projects to failure. Applying Callon's translation theory to FDMD, we identify the firm as the primary actor, which tries to develop, lead, and manage an entire actor-network. Success depends on the compliance of a widely varied set of human actors, including product designers, marketing managers, and, perhaps most critically, customers, who may come from very different sociocultural perspectives; institutional actors such as suppliers and distributors; technological actors, including products and product constellations; and macro-environmental actors, including phenomena such as weather patterns, economic conditions, and/or sociopolitical events. Often the actor-networks assembled in FDMD are as precarious and prone to failure as those that Callon examined.

Developing new products and market infrastructures can be extremely resource intensive. The premise of business is that the profit motive provides sufficient incentive for individuals or organizations to do this substantial work. In CDME, this work is undertaken by prosumers in a spirit of playful pursuit or determined self-interest or both. Even the embedded entrepreneurs who may eventually sell their business equity to commercial concerns are bound by com-

TABLE 2

KEY DIFFERENCES BETWEEN FIRM-DRIVEN MARKET DEVELOPMENT (FDMD)
AND CONSUMPTION-DRIVEN MARKET EMERGENCE (CDME)

	FDMD	CDME
Industry stance	Proactive	Passive
Consumer needs	Unproven	Systemic, self-manifesting
Locus of innovation	Centralized within firms	Distributed among embedded entrepreneurs
Drivers of innovation	Extrinsic motivation, profit	Intrinsic motivation, fun
Nature of diffusion	Pushed by firms, marketing-driven	Organic, community-driven
Market structures	Top-down, built or existing	Bottom-up, emergent
Nature of investment	High, up-front, borne by firms	Incremental, distributed
Risk of failure	High	Low

munity norms to subordinate profit seeking to the needs of the community up until that point.

Limitations and Future Research Opportunities

In examining how one new market (minimoto) emerged from a particular parentage (dirt bike racing) within a larger industry (motorcycles), we developed a conceptual model of CDME. As is customary with ANT approaches, we focused deeply on a single case, and our findings may not apply wholesale to other cases of emerging markets. It seems plausible that a similar process may have played out in a variety of other social contexts, such as the Goth market emerging from punk rock (Goulding and Saren 2007), skateboarding emerging from surfing (Brooke 1999), and the US microbrew industry emerging from home brewing (Brewers Association 2012). Additional ANT-informed research in emerging markets would be useful for testing, challenging, or modifying the CDME model.

Our model is only one of many that are possible. Other combinations of actors interacting differently will likely produce different outcomes. For example, Ansari and Phillips (2011) detail the emergence of the SMS (short message service) texting market from "the cumulative effect of the spontaneous activities of one important and particularly dispersed and unorganized group" (1579) of consumers, namely, teenagers, that encountered a technology created by telecoms for other uses and adopted it for their own purposes and practices. The emergence of texting differed from that of minimoto in several key ways. SMS consumers did not have to innovate the product; as a nonhuman actor the technology was already developed and deployed. Telecoms were not indifferent to their consumers' needs; rather, they capitalized on the growth of texting to harness new sources of revenue. Less important than the similarities or differences in the two cases is the recognition that there remains much to be learned by focusing on market emergence from other than the traditional firm-centric perspective.

It might also be fruitful to bring ANT to bear on previous studies of emerging markets, such as Thompson and Coskuner-Balli's (2007) study of community-supported agriculture. A disciplined look at the agency of material objects, spaces, and institutions may expand our understanding of a very differently structured market. Similarly, revisiting Humphreys's (2010a, 2010b) casino study with a focus on object agency and translations may reveal a richer picture of market emergence in that case.

Our study revealed the catalyzing power of certain assemblages. This discovery hints at an interesting potential of ANT in studies of market dynamics, namely, of identifying the conditions in which a network is susceptible to major translations from strategic interventions and determining what kind of catalyst is likely to effect the desired change. For example, inasmuch as markets are implicated in the problems of unsustainable production and consumption, it would be useful to understand where there might exist leverage points for altering market structures or dynamics. As Holt (2012) argues from a market construction perspective, the problems of unsustainable production and consumption do not reside so much in societal values or consumer ethics as in the idiosyncratic construction of markets.

Fox (2000) argues for an integration of community-of-practice (Lave and Wenger 1991) and ANT perspectives to understand not only the structure of organizations as assemblages of human and technological actors but also the mechanisms by which learning and organizing occur. Wenger (1998) explains how individuals move into and through and identify with communities of practice and how those communities transform and self-stabilize. He does not, however, account for how the community of practice forms in the first place. We suspect that communities of practice may commonly begin as self-organizing communities of purpose (Schouten and Martin 2011). Communities of purpose (e.g., a consumer boycott) may disband once a particular aim is achieved; alternatively, their sensemaking processes (Weick 1979, 1995) may translate into practices and material structures that become stabilizing actors in a network that endures beyond the achievement of a single goal. The proposition of a logical progression from community of purpose to community of practice in the realm of consumption and markets merits further study. An ANT perspective focusing on materiality, translations, practices, and discourses would well suit the task.

Finally, our dive into the dynamics of consumer innovation reveals implications for actor-network theorizing in other areas of consumption, such as identity formation. ANT, in its insistence upon radical symmetry between human and object agencies, tends to eschew the intrapsychic domain altogether. Based on our empirics, however, we are forced to recognize emotions such as desire and fear as potent actors upon the human subject, as potent perhaps as external social and material actors. It is no stretch to conceptualize consumer identity as an actor-network in which the individual, as the obligatory point of passage, problematizes the self and manages the human and nonhuman resources of identity construction.

DATA COLLECTION INFORMATION

The authors collected all primary data through interviews and observation. Fieldwork occurred in Las Vegas, Nevada, in May 2005, May 2006, and February 2013. Interviews with the key informants, Tim and Cindy C., were conducted at their home in southern Oregon in October 2005.

REFERENCES

Amabile, Teresa M. (1996), *Creativity in Context*, Boulder, CO: Westview.

Ansari, Shahzad, and Nelson Phillips (2011), "Text Me! New Consumer Practices and Change in Organizational Fields," *Organization Science*, 22 (November–December), 1579–99.

Araujo, Luis, John Finch, and Hans Kjellberg (2010), "Reconnecting Marketing to Markets: An Introduction," in *Reconnecting Marketing to Markets: Practice-Based Approaches*, ed. Luis Araujo, John Finch, and Hans Kjellberg, Oxford: Oxford University Press, 1–12.

Arnould, Eric, Linda Price, and Risto Moisio (2006), "Making

Contexts Matter: Selecting Research Contexts for Theoretical Insights," in *Handbook of Qualitative Research Methods in Marketing*, ed. Russell W. Belk, Northhampton, MA: Edward Elgar, 106–25.

Bajde, Domen (2013), "Consumer Culture Theory (Re)visits Actor-Network Theory: Flattening Consumption Studies," *Marketing Theory*, 13 (2), 227–42.

Baldwin, Carliss, Christoph Hienerth, and Eric von Hippel (2006), "How User Innovations Become Commercial Products: A Theoretical Investigation and Case Study," *Research Policy*, 35 (November), 1291–1313.

Bass, Frank M. (1969), "A New Product Growth Model for Consumer Durables," *Management Science*, 15 (1), 215–27.

Bourdieu, Pierre (1986), "The Forms of Capital," in *Handbook for Theory and Research for the Sociology of Education*, ed. John G. Richardson, Westport, CT: Greenwood, 241–58.

——— (1998), *Practical Reason*, Stanford, CA: Stanford University Press.

Brewers Association (2012), "The History of Craft Brewing," http://www.brewersassociation.org/pages/about-us/history-of-craft-brewing.

Brooke, Michael (1999), *The Concrete Wave: The History of Skateboarding*, Toronto: Warwick.

Brown, Carson (2011), "A View from Carson's World: MiniMoto SX 2011," *MiniMoto SX*, March 9, http://www.minimotosx.com/features/a-view-from-carsons-world-minimoto-sx-2011/.

Caliskan, Koray, and Michel Callon (2010), "Economization, Part 2: A Research Programme for the Study of Markets," *Economy and Society*, 39 (February), 1–32.

Callon, Michel (1986), "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Brieuc Bay," in *Power, Action and Belief: A New Sociology of Knowledge*, ed. John Law, London: Routledge, 196–223.

——— (1987), "Society in the Making: The Study of Technology as a Tool for Sociological Analysis," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, ed. William E. Bijker, Thomas P. Hughes, and Trevor Pinch, Cambridge, MA: MIT Press, 83–103.

Coatney, Cameron (2005), "2006 Yamaha TT-R50E," *MotorcycleUSA.com*, August 22, http://www.motorcycle-usa.com/277/957/Motorcycle-Article/2006-Yamaha-TT-R50E.aspx.

Cova, Bernard, and Daniele Dalli (2009), "Working Consumers: The Next Step in Marketing Theory?" *Marketing Theory*, 9 (3), 315–39.

Day, George S., and John R. Kimberly (1995) "How Firms Adapt to Evolving Markets," in *Redesigning the Firm*, ed. Edward H. Bowman and Bruce M. Kogut, New York: Oxford University Press, 218–40.

Fligstein, Neil, and Luke Dauter (2007), "The Sociology of Markets," *Annual Review of Sociology*, 33 (August), 105–28.

Fortune Hanebrink (2012), "About FH, Inc.," http://www.fortunehanebrink.com/pages/about-us.

Fox, Stephen (2000), "Communities of Practice, Foucault and Actor-Network Theory," *Journal of Management Studies*, 37 (September), 853–67.

Geiger, Susi, Hans Kjellberg, and Robert Spencer (2012), "Shaping Exchanges, Building Markets," *Consumption Markets and Culture*, 15 (2), 133–47.

Giesler, Markus (2008), "Conflict and Compromise: Drama in Marketplace Evolution," *Journal of Consumer Research*, 34 (April), 739–53.

——— (2012), "How Doppelgänger Brand Images Influence the Market Creation Process: Longitudinal Insights from the Rise of Botox Cosmetic," *Journal of Marketing*, 76 (November), 56–68.

Gille, Zsuzsa (2010), "Actor Networks, Modes of Production, and Waste Regimes: Reassembling the Macro-Social," *Environment and Planning A* 42 (5), 1049–64.

Goulding, Christina, and Michael Saren (2007), "'Gothic' Entrepreneurs: A Study of the Subcultural Commodification Process," in *Consumer Tribes*, ed. Bernard Cova, Robert V. Kozinets, and Avi Shankar, Oxford: Butterworth-Heinemann, 227–42.

Granovetter, Mark S. (1973), "The Strength of Weak Ties," *American Journal of Sociology*, 78 (May), 1360–80.

——— (1985), "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology*, 91 (November), 481–510.

Hauser, John, Gerard Tellis, and Abbie Griffin (2006), "Research on Innovation and New Products: A Review and Agenda for Marketing Science," *Marketing Science*, 25 (November–December), 687–717.

——— (2012), "Constructing Sustainable Consumption: From Ethical Values to the Cultural Transformation of Unsustainable Markets," *Annals of the American Academy of Political and Social Science*, 644 (November), 236–55.

Humphreys, Ashlee (2010a), "Megamarketing: The Creation of Markets as a Social Process," *Journal of Marketing*, 74 (March), 1–19.

——— (2010b) "Semiotic Structure and the Legitimation of Consumption Practices: The Case of Casino Gambling," *Journal of Consumer Research*, 37 (October), 490–510.

Kerin, Roger A., P. Rajan Varadarajan, and Robert A. Peterson (1992), "First-Mover Advantage: A Synthesis, Conceptual Framework, and Research Propositions," *Journal of Marketing*, 56 (October), 33–52.

Kogut, Bruce, and Anca Metiu (2001), "Open-Source Software Development and Distributed Innovation," *Oxford Review of Economic Policy*, 17 (June), 248–64.

Korfhage, Brian (2004), "Project Mini Moto Prologue," *MotorcycleUSA.com*, Wednesday, April 21, http://www.motorcycle-usa.com/524/3096/Motorcycle-Article/Project-Mini-Moto-Prologue.aspx.

——— (2005), "2005 Xtreme Pit Pro CR2," *MotorcycleUSA.com*, Friday, February 4, http://www.motorcycle-usa.com/Article_Page.aspx?ArticleID = 1816&Page = 1.

Kotler, Philip (1986), "Megamarketing," *Harvard Business Review*, 64 (March–April), 117–25.

Kozinets, Robert V. (2002), "Can Consumers Escape the Market? Emancipatory Illuminations from Burning Man," *Journal of Consumer Research*, 29 (June), 20–38.

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

Lave, Jean, and Etienne Wenger (1991), *Situated Learning: Legitimate Peripheral Participation*, Cambridge: Cambridge University Press.

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

——— (2008), "Actor Network Theory and Material Semiotic," in *The New Blackwell Companion to Social Theory*, ed. Bryan S. Turner, Hoboken, NJ: Wiley-Blackwell.

Lieberman, Marvin B., and David B. Montgomery (1988), "First-Mover Advantages," *Strategic Management Journal*, 9 (Summer), 41–58.

Lovell, Lindsay (2012), "Top Ten Reasons to Go to the 2012 GEICO MiniMotoSX," *MiniMotoSX*, March 14, http://www.minimotosx.com/uncategorized/top-ten-reasons-to-go-to-the-2012-geico-minimotosx/.

Martin, Diane M., John W. Schouten, and James H. McAlexander (2006), "Claiming the Throttle: Multiple Femininities in a Hyper-Masculine Subculture," *Consumption, Markets and Culture*, 9 (3), 171–205.

Moreau, C. Page, and Darren W. Dahl (2005), "Designing the Solution: The Impact of Constraints on Consumers' Creativity," *Journal of Consumer Research*, 32 (June), 13–22.

Nimmo, Richie (2011), "Actor-Network Theory and Methodology: Social Research in a More-than-Human World," *Methodological Innovations Online*, 6 (3), 108–19.

Pike, Nick (2011), "Off-Roaders Decry Loss of Access," *Chico News and Review*, November 24, http://www.newsreview.com/chico/off-roaders-decry-loss-of-access/content?oid=4511465.

Polanyi, Karl (1944), *The Great Transformation: Economic and Political Origins of Our Time*, New York: Rinehart.

Press, Melea, and Eric J. Arnould (2011), "Legitimating Community Supported Agriculture through American Pastoralist Ideology," *Journal of Consumer Culture*, 11 (July), 168–94.

Rindfleisch, Aric, and Christine Moorman (2001), "The Acquisition and Utilization of Information in New Product Alliances: A Strength-of-Ties Perspective," *Marketing*, 65 (2), 1–18.

Robichaud, Daniel, and François Cooren (2013), "Introduction: The Need for New Materials in the Constitution of Organization," in *Organization and Organizing: Materiality, Agency and Discourse*, ed. Daniel Robichaud and François Cooren, New York: Routledge, xvi.

Rogers, Everett M. (1983), *Diffusion of Innovations*, 3rd ed., New York: Macmillian.

Sandikci, Özlem, and Güliz Ger (2010), "Veiling in Style: How Does a Stigmatized Practice Become Fashionable?" *Journal of Consumer Research*, 37 (June), 15–36.

Sarasvathy, Saras D. (2001), "Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency," *Academy of Management Review*, 26 (April), 243–63.

Scaraboto, Daiane, and Eileen Fischer (2013), "Frustrated Fatshionistas: An Institutional Theory Perspective on Consumer Quests for Greater Choice in Mainstream Markets," *Journal of Consumer Research*, 39 (April), 1234–57.

Schatzki, Theodore (1996), *Social Practices: A Wittgensteinian Approach to Human Activity and the Social*, Cambridge: Cambridge University Press.

Schouten, John W., and Diane M. Martin (2011), "Communities of Purpose," in *Changing Consumer Roles: An Anthology*, ed. Karin M. Ekström and Kay Glans, London: Routledge, 125–36.

Schouten, John W., and James H. McAlexander (1995), "Subcultures of Consumption: An Ethnography of the New Bikers," *Journal of Consumer Research*, 22 (June), 43–61.

Schumpeter, Joseph A. (1942/1975), *Capitalism, Socialism and Democracy*, New York: Harper & Row.

Sherry, John F., Jr., and Tonya Williams Bradford (2011), "A Cultural Analysis of Tailgating on a Midwestern American Collegiate Campus," paper presented at the Consumer Culture Theory Conference, Evanston, IL.

Thomas, Tandy Chalmers, Linda L. Price, and Hope Jensen Schau (2013), "When Differences Unite: Resource Dependence in Heterogeneous Consumption Communities," *Journal of Consumer Research*, 39 (February), 1010–33.

Thompson, Craig J., and Gokcen Coskuner-Balli (2007), "Countervailing Market Responses to Corporate Co-optation and the Ideological Recruitment of Consumption Communities," *Journal of Consumer Research*, 34 (August), 135–52.

Thornton, Sarah (1996), *Club Cultures: Music, Media and Subcultural Capital*, Cambridge: Polity.

Toffler, Alvin (1980), *The Third Wave*, New York: Bantam.

Urban, Glen L., and John R. Hauser (1993), *Design and Marketing of New Products*, 2nd ed., Englewood Cliffs, NJ: Prentice Hall.

Van de Ven, Andrew H. (1995), "Managing the Process of Organizational Innovation," in *Organizational Change and Redesign: Ideas and Insights for Improving Performance*, ed. George P. Huber and William H. Glick, New York: Oxford University Press, 269–94.

Venkatesh, Alladi, and Lisa Peñaloza (2006), "From Marketing to the *Market*: A Call for Paradigm Shift," in *Does Marketing Need Reform?* ed. Jagdeth Sheth and Rajendra Sisodia, Armonk, NY: M. E. Sharpe, 134–50.

von Hippel, Eric (1986), "Lead Users: A Source of Novel Product Concepts," *Management Science*, 32 (July), 791–805.

——— (2005), *Democratizing Innovation*, Cambridge, MA: MIT Press.

Weick, Karl E. (1979), *The Social Psychology of Organizing*, Reading, MA: Addison-Wesley.

——— (1995), *Sensemaking in Organizations*, Thousand Oaks, CA: Sage.

Wenger, Etienne (1998), *Communities of Practice: Learning, Meaning, and Identity*, New York: Cambridge University Press.

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