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Understanding the do-it-yourself consumer: DIY motivations and outcomes

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Abstract Do-it-yourself (DIY) is an increasingly popular consumer behavior, but little is known about this large consumer segment. We undertake a depth interview study and review diverse literatures to develop a conceptual model of DIY behavior that explores the reasons why consumers DIY and the benefits they receive. The purpose of the model is to improve our understanding of a consumer segment that, in many ways, behaves differently from typical consumers. Research propositions are derived and discussions of implications and ideas for future research follow.

Keywords Do-it-yourself (DIY) · Consumer behavior · Motivations · Outcomes · Prosumption

Introduction

Marketing theory recognizes the importance of consumer involvement in the co-creation of value (Vargo and Lusch 2004), but the consumer typically is viewed only as the passive buyer of what others produce and not as the active producer of goods or services (Xie et al. 2008). An exception is Kotler (1986a), who forecast that a new type of consumer, the prosumer, would emerge from the sociocultural environment of modern society. Consistent with the notion of "value co-creation" (Lusch and Vargo 2006, p. 284), prosumption activities are defined as consumers producing products for their own consumption (Xie et al. 2008). Consumers increasingly will be drawn toward prosumption and "Marketers must find methods to facilitate prosumption activity" (Kotler 1986a, p. 511). We focus on a specific form of prosumption known as Do-It-Yourself (DIY), which we define as activities in which individuals engage raw and semi-raw materials and component parts to produce, transform, or reconstruct material possessions, including those drawn from the natural environment (e.g., landscaping).

DIY consumer products sold by the home improvement industry typically are unfinished and designed for use in different formats (e.g., pieces of lumber). Thus, people who undertake DIY projects (DIYers) go beyond the construction of meaning of a commodity because these consumers are both the designer of the functional specifications and the builder. They choose among available materials and tools, engineer the work process to complete the project, and act as inspectors and evaluators when deciding whether the product has achieved the desired value. The degree of involvement in DIY behaviors distinguishes it from other self-servicing forms of do-it-yourself where the focal benefit is time and the convenience of service delivery (e.g., ATM, fast food, and gasoline) (Bateson 1985; Dabholkar 1996). Self-servicing during gasoline, fast food, and banking transactions is a convenience for delivering the final product directly to the consumer. A distinction that can be made between self-service and DIY is that there is nothing convenient about remodeling one's home or landscaping one's yard. Self-servicing also is distinguishable from DIY by the accelerated speed of product delivery. Unlike self-service banking and gas stations, DIY home improvement projects typically are labor intensive.

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DIY also can be distinguished from Arts & Crafts activities by the types of projects, tools and materials involved, amount of labor, and the money spent on projects. DIY projects typically consume greater resources than Arts & Crafts projects. The retail industry differentiates between Arts & Crafts and DIY by providing different retail outlets that separate the types of items sold in stores (e.g., Home Depot vs. Michaels). The home improvement industry's focus resides with building materials, home improvement, and garden products, whereas Arts & Crafts retailers mostly carry home décor products (framed art, baskets, potpourri, etc.) and supplies (e.g., for jewelry making, needlecraft, knitting, soap and candle making, and plush toys). There is little overlap in product assortments between the two retail segments.

The retail home improvement industry has grown steadily, with 2011 U.S.-based sales forecast to be $267 billion (Home Improvement Research Institute 2011). Despite the size and growth of the industry, DIY behaviors have prompted few academic studies. Early DIY-related research typically profiles the DIY segment relative to a non-DIY segment (Bush et al. 1987; Hornik and Feldman 1982; Schwartzlander and Bowers 1989), whereas the more recent work explores motives for DIY behavior (Watson and Shove 2008; Williams 2008). In contrast, our goal is to examine consumers' DIY behaviors and develop a conceptual model that considers the motivators and the outcomes of DIY behaviors. The model shown in Fig. 1 gives insights regarding consumers' DIY behaviors and offers marketers ideas for improving their value propositions (Gebhardt et al. 2006).

Because there is little existing theory associated with DIY behavior, we conduct a study of DIYers using depth interviews to gain insights. We integrate the discussion of our interview data with a multidisciplinary review of relevant literature that informs the development of a grounded theory of the motivations and outcomes of DIY behavior. The multidisciplinary review highlights the importance of DIY behavior for extending and identifying gaps in the existing consumer behavior literature (Crittenden et al. 2011). Specifically, DIY is a consumer activity that, among other properties, offers consumers the make-or-buy decision, extends strategies for circumventing dissatisfactory product experiences beyond negative word-of-mouth and complaining, enables the redistribution of household budget items, allows individuals to build and enhance identities, and broadens notions of material values by suggesting that new values can be derived through crafting material goods.

Co-creation, co-production, prosumption and DIY: consumers doing it for themselves

Marketers once assumed that a product was consumed only after the value adding process was complete, but a shift from a goods-centered logic to a more reciprocal service-centered logic views producers and consumers as collaborators who co-create and co-produce (Vargo and Lusch 2004). Co-

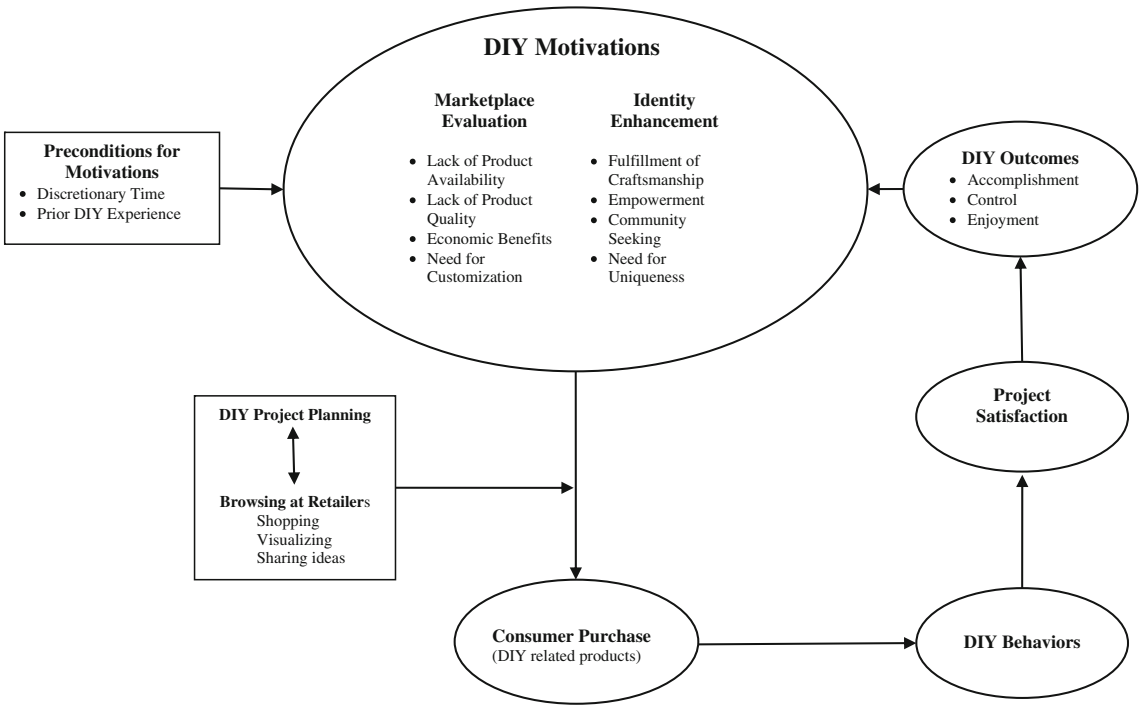

Fig. 1 A conceptual model of the motivations and outcomes of DIY behaviors

creation is closely tied to usage, consumption, value in use, and the premise that value can be determined only by the customer. For a product to be useful, individuals have to learn and apply skills and knowledge that create value-in-use. Examples of such value creating activities are driving an automobile and charging and answering a cell phone (Humphreys and Grayson 2008). Co-production, on the other hand, means the customer participates in creating the core offering "through shared inventiveness and co-design" (Lusch et al. 2007, p. 11), and customers are engaged as active participants in the organization's work to provide a better core product to consumers (Auh et al. 2007). Consumers become co-producers when they perform activities traditionally overseen by company employees. Self-serve gas and fast food restaurants are examples of co-production. Integrating customers in the production of goods and services can enhance an organization's ability to compete by meeting customers' desires (Lusch et al. 2007).

Similar to co-creation and co-production is the notion of prosumption, a term first coined by culture critic and futurist Alvin Toffler (1980) to emphasize the novelty of people simultaneously playing the roles of consumer and producer. Prosumption can be defined as "a value creation activity undertaken by the consumer that results in the production of products they eventually consume and that becomes their consumption experience" (Xie et al. 2008, p. 110). Prosumption is a process that integrates physical activities, mental effort, and socio-psychological experiences (Xie et al. 2008) and is similar to co-creation and co-production because consumers become participants in producing and creating goods.

If these forms of consumer production of goods and services are ordered in terms of their requirements for consumer involvement and effort, then co-creation requires the least from consumers, followed by co-production, and then prosumption (which includes DIY). Co-creation assumes consumer involvement is limited to using the product and learning how it operates, co-production assumes consumers take over functions previously performed by the company (e.g., assembly of parts), and prosumption assumes that consumers produce their own products for consumption (Xie et al. 2008). This ordering is consistent with our definition of DIY behaviors—activities in which individuals engage raw and semi-raw materials and component parts to produce, transform, or reconstruct material possessions, including those drawn from the natural environment—that exemplify prosumption and are at the highest level of co-production due to the typically considerable involvement required from the DIY consumer.

Of course, there can be overlap among co-creation, co-production, and prosumption activities in terms of a consumer's involvement and the effort required to produce a good or service. The self-servicing, Arts & Crafts, and DIY behaviors described earlier also can overlap, as these all are forms of co-production and prosumption. As evidence for the overlap among these behaviors, some supplies for Arts & Crafts activities can be found at home improvement retailers (e.g., various forms of fasteners or glues), and the reverse also is true (e.g., mirrors at Arts & Crafts retailers). However, DIY projects typically have the highest material costs and require greater levels of innovation, design, knowledge, skills, and time than other forms of prosumption. These requirements set DIY apart from traditional prosumption activities like home food production and Arts & Crafts.

Developing and informing a conceptual model of DIY behavior

We use a grounded theory approach to develop a conceptual model of the motivators and outcomes of DIY behavior that describes the underlying consumer processes involved when creating a DIY consumption experience. Grounded theory seeks to build theories from qualitative field data that can be tested or extended by others (Strauss and Corbin 1998). The purpose of the model and the discussion is to improve the understanding of a large and important consumer market. Because few studies have been published in this area, more information is needed to inform the development of a model. Therefore, we conducted both formal and informal depth interviews with DIYers to gain insights into their DIY experiences (Weaven and Herington 2006). Following several dozen informal interviews with DIYers at DIY retail establishments, we conducted 16 formal interviews with self-professed DIYers (summary in Table 1).

Depth interview participants resided in the southern United States and were selected to vary the type and difficulty of their DIY projects (Glaser and Strauss 1967). The formal interviews ranged in length from 45 to 75 min and took place in participants' homes and garages, i.e., the places where their DIY activities took place. One exception was an interview held in a coffee shop, where the participant was the owner who remodeled the shop as a DIY project. Participants were asked to tell stories about their most recent DIY project and about projects deemed to result in positive or less-than-positive experiences. The interviews were digitally recorded and transcribed by the authors resulting in 178 single-spaced typed pages.

The transcribed interviews served as text for a grounded theory of consumers' DIY behaviors (Strauss and Corbin 1998). Themes, categories, and relationships emerged throughout the interview process, and we continued collecting interviews until our themes were saturated and no additional refinements emerged from the addition of more participants (Glaser and Strauss 1967). Data were analyzed

Table 1 Characteristics of participant do-it-yourselfers

	Participant	Gender	Age	Occupation	Years of DIY Experience	Last Project Type	Duration of last Project
1	Jeremy	Male	28	IT Specialist	10	Remodel home (flooring, tiling, fixtures)	5 months
2	Sam	Male	43	Self-Employed	18	Remodel home/workplace (flooring, tiling, walls, facade, plumbing)	2 years
3	Simon	Male	34	Hairstylist	9	Trailer remodeling (woodwork, mechanical)	4 weeks
4	Tommy	Male	41	Academic	22	Deck, car repair (woodwork, mechanical)	3 weeks
5	Jim	Male	57	TV Network Technician	40	Remodel home (walls, flooring, tiling, mechanical, plumbing)	1 year
6	Linda	Female	42	Hairstylist	10	Remodel home/workplace (flooring, piping, window treatment)	2 years
7	Bert	Male	31	Delivery Service	15	Remodel bathroom (tiling, fixtures, windows)	2 weeks
8	Bob	Male	24	Mechanic	10	Add rooms (stairs, woodwork, plumbing, electrical)	6 months
9	Charles	Male	62	Retired	40	Build Tiki-Bar (tiling, woodwork),	2 months
10	Judy	Female	52	Business Developer, Manager	22	Remodel bathroom, demo, flooring, walls, tiling,	3 months
11	Steve	Male	39	Cable Technician	21	Garage (woodwork, brick work)	1 week
12	Walter	Male	26	Student/Sales Clerk	4	Fix closet doors (mechanical)	1 day
13	Lora	Female	48	Office Manager	5	Kitchen Remodeling (sink, ceiling, counter top, appliances)	4 weeks
14	Pat	Female	45	Marketing Manager	7	Bathroom remodeling (tiling, flooring, fixtures)	1 months
15	Beth	Female	43	Education Administration	10	Light fixtures, appliance repair	1 week
16	Carmen	Female	40	Administrative Assistant	6	Painting ex/interior, kitchen remodeling	3 months

using open coding, which begins with creating abstract representations of important "events, happenings, objects, and actions and interactions" (Strauss and Corbin 1998, p. 102). The next step in the open coding process involves grouping concepts into categories (Strauss and Corbin 1998). During this phase, theory began to emerge with the identification of the motivations and outcomes that form dominant themes in the data.

The process of alternating between reviewing relevant literature and collecting data is a part of the immersion process indicative of grounded theory design (Strauss and Corbin 1998), so the literature associated with consumer behavior, retailing, services, consumer psychology, sociology, leisure, and gender was reviewed for reports of DIY behaviors. For example, the literature alerted us to the possibility of economic motivations for DIY on the basis of income (Bush et al. 1987; Hornik and Feldman 1982; Schwartzlander and Bowers 1989), and we found that economic savings were important for our participants' decisions to engage in DIY activities. We also noted contradictory findings regarding consumers' income and their DIY behavior, which pointed us towards the possibility of additional motivational forces. During the process of reading the interview data closely we encountered themes not addressed in the literature, which resulted in iterative revisions and extensions to our conceptual model (Close and Zinkhan 2009). An example of a new theme was that study participants indicated that, when inside retail store environments, they began to imagine solutions to their current and future projects. This was surprising to us because typical home improvement retailers' warehouse-like product displays give little attention to finished DIY projects. Insights into themes also emerged from the authors' participation in the DIY community, such as participation in online communities where we offered and received advice on DIY projects (e.g., easy2DIY.com; DIYnetwork.com; autorepair.com; homedepot.com; lowes.com).

Motivators and outcomes of DIY behavior: the conceptual model and propositions

Our depth interview study and literature review found multiple motivations for undertaking DIY projects and several outcomes of such behavior. The motivations for DIY behavior fall into two categories and arise from (1) marketplace evaluations of goods and services and (2) identity enhancement. Certain conditions render these motivations more likely to emerge: DIYers' discretionary time and their prior

DIY experience. Once evoked, the motivations to undergo DIY behavior typically result in the purchase of DIY related materials and products. However, this relationship is moderated by the retail environment because it can enhance the visualizing of projects and the sharing of ideas with others, both of which can cause DIYers to revise their project plans and purchase decisions. We also found that engaging in and completing DIY projects result in outcomes beyond the direct benefits provided by the project; these include feelings of accomplishment, control, and enjoyment that may affect the motivation to undertake future DIY projects. In the subsequent sections we elaborate on the constructs and linkages in our model and ground these relationships in comments from study participants. Propositions are formulated to emphasize the relationships between constructs (Bacharach 1989).

Antecedent conditions for motivations to DIY: consumer characteristics

Two consumer characteristics are antecedent conditions for consumers' motivations to DIY: their amount of discretionary time and their prior DIY experience. The following quotes from interviews illustrate these conditions.

> Well, time is definitely an issue. It depends if there is a time crunch. If I have time issues then I might look into other resources. But if it is something I have time for I probably do it myself. Sometimes I start something knowing I will encounter time issues in the future, like crunch time at work or school, but then it just takes longer to finish. But that's okay. (Judy, age 52)

> As a child I hung out with my dad a lot but didn't learn a whole bunch. He already knew how to do all those things and just wanted to get it done. Now that I'm older he is showing me how to do things. So, now I'm catching up with the experience. It may take me two times to get it right, but I'll get it done. (Simon, age 34)

Discretionary time for DIY behavior is related to the anticipated time needed to complete a DIY project. Experience informs these expectations as illustrated by the quote above from Simon, which suggests he knows that he may have to do it twice to get it right. When estimated time requirements do not match discretionary time, people may abstain from or delay DIY behavior. Judy, for example, may consider other resources if time is unavailable. However, some DIYers also commence projects knowing that the likelihood of delay exists, accepting an uncertain completion date and planning their projects accordingly. DIY experience (skills and materials knowledge) also influences the decision to undertake a DIY project. Individuals without such experience are less likely to engage in DIY behavior. For example, Simon reports that he feels challenged by DIY projects because he did not learn much from his father's DIY projects. Simon realizes that he missed out on opportunities to experience DIY at an early age and relies on his father for DIY advice. DIY experience can arise from an individual's socialization (John 1999; Moschis 1981), through which the skills and materials knowledge needed for DIY behaviors are acquired.

Motivations to DIY: marketplace evaluations

Our study participants' data suggest that DIY behavior is driven by four types of marketplace evaluations: (1) the relative economic benefits of DIY, (2) a perceived lack of quality from available offerings, (3) a lack of product availability, and (4) the need for customization. DIYers carry out marketplace evaluations by examining offerings in stores, examining work completed by professionals, and obtaining estimates. We describe these marketplace evaluations and provide some examples.

Relative economic benefits

The need for saving and being better off economically is a strong motivator for undertaking DIY activities, and we assume that many DIYers are attempting to save money over purchasing professional goods and services. DIYers compare the expected economic value with the purchase of a marketplace option for similar goods and services to assess the relative economic benefits of DIY projects. A number of our interview participants stated that the money saved by doing a project themselves could be used to acquire additional or upgraded items for their projects (e.g., better fixtures or higher quality wood) or would allow them to purchase material for future projects.

> We actually prefer to do it ourselves. It may be a trust issue but also a money issue, you know. The estimate for the bathroom was between $3000 and $4000, but we did it for less than a $1000. The money we saved we can use for something else like upgraded appliances or fixtures we wouldn't have money for otherwise. (Bert, age 31)

The DIY market effectively offers consumers the equivalent of the make-or-buy decision faced by manufacturers, whose decisions to produce their own products becomes practical if it results in savings relative to purchasing goods or services. It might be expected, therefore, that individuals with lesser incomes are more likely to engage in DIY activities than individuals with higher incomes. However, where some studies find a positive relationship between income and DIY activities (Bogdon 1996; Bush et al.

1987), others find a negative relationship (Pollakowski 1988; Schwartzlander and Bowers 1989; Williams 2004). The conflicting findings suggest that the economic need deriving from income status may be an insufficient and overly simplistic view of how consumers weigh the economics of the DIY decision. Our study participants have a wide range of incomes and their reports challenge the notion of income as a motivator for DIY. Rather, participants describe their motivations to DIY in terms of spending money wisely and not in terms of income. The desire to save money in one place and spend it elsewhere is not a motivation exclusively for those of lower socioeconomic status, because frugality cuts across individuals from different economic backgrounds (Lastovicka et al. 1999). Although DIY activities do not increase household income, the ability to repair and maintain the household by saving on professional help enables individuals to budget for other needs and desires, thus enhancing their overall standard of living (Hornik and Feldman 1982).

Lack of product quality in the professional sector

Another motivation to undertake DIY projects is the perception that professional services may not achieve sufficient quality; this possibility can influence DIYers' decisions to make the good or perform the service themselves (Brown et al. 2005; Lusch et al. 1992).

> I have seen the work some professionals have done at my mom's house and I just shook my head. See, they may not care much about the detail, but when you do something yourself you really take pride in it. More so than paying somebody to do it. I always took more pride in what I was doing when it is mine, and tried to do the job the best. Somebody else may not care as much and pays less attention to details like grouts and edges. (Jeremy, age 28)

Jeremy concluded that DIY behavior was the better option given his experience with professionals, whom he believes lack the pride and quality of workmanship to which he aspires in his own projects. A German study found that 60% of DIYers perceive their own production quality as superior to professionals, thus poor quality is a motivation for DIY behavior (Institut für Freizeitwirtschaft 1999). Complaining behavior, avoidance, negative word of mouth, and boycotts are the typical responses consumers make when product quality is perceived as lacking (Blodgett et al. 1995; Sen et al. 2001; Voorhees et al. 2006; Yuksel and Mryteza 2009), but DIY offers consumers another strategy for circumventing dissatisfactory experiences that largely has been ignored by previous research.

Lack of product availability

The absence of product availability is another marketplace evaluation that can motivate DIY behavior and has an effect similar to the perception of insufficient quality, i.e., it encourages consumers to perform DIY activities for goods, repairs, and maintenance.

> I guess we could have gotten it done. If you put money on the table you can get anything done. But they [the builder] said they can't find anybody they trust to do the stairs. He had issues with quality, reliability before. Some were not insured, so he said we just don't do stairs. So, you have to come up with something. (Charles, age 62)

For example, a lack of product availability can occur when the housing industry experiences high demand and a shortage of qualified home repair and renovation professionals. This can be a problem for individuals who require service for a relatively small job such as one broken tile or a leaking faucet because professional repair services may view small home repair jobs as less profitable and not worth servicing. In addition, if the scheduling of the service professional does not meet consumers' needs, then they may be more inclined to do the job themselves rather than wait.

Although reactions to inadequate product availability are described in prior research, a consumer's decision to construct, modify or repair a product him or herself has not been studied. A lack of product availability (temporary or permanent) can cause consumers to switch to another product, purchase from competing stores, defer the purchase to the next shopping occasion, or completely give up the purchase (Campo et al. 2004; Corstjens and Corstjens 1995). Geographical and cyclical unavailability and the elimination of brands or product categories can cause consumers to switch to other brands or cycle between brands (Martin 2002). Unavailable products can motivate consumers to find a competitor's product or switch to a different product category (Min and West 2003; Sloot and Verhoef 2008). Studies of out-of-stock situations and discontinued products point toward a variety of consumer reactions such as switching stores and brands, not returning to the same store on the next shopping trip, spending less, or postponing the purchase (Fitzsimons 2000; Martin 2002; Emmelhainz et al. 1991; Sloot et al. 2005). However, although customer reactions to product unavailability have been widely examined, the DIY response offers another alternative to consumers and deserves consideration by researchers.

The need for customization

A motivation closely related to a lack of product availability is the need to customize one's products, and study participants

clearly indicated that they can satisfy their specific product needs through DIY behaviors. With its infinite product applications and combinations of raw and semi raw materials, the DIY market provides opportunities for consumers to create their own customized products. In one example, Bert told us about a project where market options did not satisfy his needs, resulting in his planning, designing, and constructing a kayak.

> When I built my kayak I designed it on the computer as a hybrid wood and fiberglass structure. The design is somewhat special, but the ideas came from fishing and outdoor magazines. I wanted to build it according to what I needed my kayak to do, and because I could not get anything like that in stores. They offer either fishing or leisure kayaks, but not both. Fishing kayaks have a wider hull, sit-on-top, are flatter, thus slower in the water. Leisure kayaks have more of a V-hull and are sit-in. I combined the two structures to use the kayak for both, fishing and river paddling. (Bert, age 31)

The primary motivation for Bert to develop and construct his own kayak was to ensure that the kayak would serve his particular needs. The fact that the marketplace did not offer a suitable alternative motivated Bert to consider building his own. In a second example, Bob explains why he decided to build custom shelving.

> My built-in shelving for example. I have looked at a number of samples in magazines and then built it according to the size of the bed. Putting K-Mart shelves up was not an option… I wanted something that goes along with the finish of the furniture and looks like it was part of it. I built in the nightstands with a type of book shelf across the headboard. It was meant to look like part of the bed…. It took longer than I thought but was worth it. (Bob, age 24)

A positive benefit provided to DIYers is control over the customization process, and the ability to implement changes without going through a second party.

Firms that offer customization of their products typically give customers few options or permit customers only limited involvement in the customization of the firm's products. Customized products can generate greater benefits for customers than mass marketed products because they deliver a better fit to customers' preferences (Franke et al. 2009; Simonson 2005; Schreier 2006), although customization still is traded off against quality and price (Valenzuela et al. 2009). The benefits of customization require that customers are aware of their preferences and can communicate them to professionals (Franke et al. 2009; Tuli et al. 2007). However, little is known about consumers' willingness to produce and customize their own products given their individual needs and preferences.

It cannot be assumed that all consumers who cannot find acceptable market offerings will engage in DIY activities to satisfy their needs, but DIY provides options for consumers who expect economic benefits arising from DIY behaviors, perceive a lack of product quality or availability in the marketplace, or need customized products. Therefore, we suggest that:

Proposition 1 Consumers who engage in DIY behavior are motivated by marketplace evaluations that include the

a) relative economic benefits
b) lack of product quality
c) lack of product availability
d) need for customization

Motivations to DIY: identity enhancement

An important category of motivators that emerged from participants' DIY activities involved identity enhancement and maintenance. Four sources of identity enhancement were described as meaningful by our DIY participants, including: (1) a sense of empowerment; (2) an identity as a craftsman; (3) membership in a community of DIY enthusiasts; and (4) the need to be unique or different from others. Interestingly, the salience of these motivations differed across genders.

Achieving an enhanced sense of empowerment

Study participants felt empowered by prior DIY behavior and motivated to undertake further DIY projects, particularly the female DIYers we interviewed. For example, while telling a story of how she used heavy tools to create a bathroom completely from scratch, Judy shared the following:

> It is also a very empowering and independent feeling…whenever tearing down a wall or putting up a wall using a big hammer and crowbar, gloves and goggles. And either breaking through a wall or concrete makes you feel pretty strong. Don't get to do this every day. (Judy, age 52)

Judy described knocking down a wall, breaking through a concrete floor, moving a water heater, and putting up walls and doorframes as empowering. Walls and concrete can symbolize lasting boundaries, and tearing down those boundaries may instill the sense of empowerment Judy experienced. Her remarks reveal that completing DIY tasks can create feelings of physical strength, authority, and independence. Similarly, but less focused on physical strength, Linda states that continually having to prove herself to "Joe,

the contractor" was frustrating, but her DIY experiences provided reassurance of her capabilities.

> It makes you feel independent, but the matter of fact is that I may feel stronger as a female. I still have to go against Joe, the contractor, and convince him that I know what I'm doing. It may be a disadvantage at times because you are so frustrated to make your point. It's a constant reassuring yourself you know what you are talking about, because they are going to counter with a different way to do it. They constantly try to sell you on the up-scale product assuming you don't know what you are talking about. However, knowing what I know adds a lot of confidence in dealing with that. (Linda, age 42)

By recognizing her knowledge of various DIY tasks, Linda was able to boost her confidence when taking on professionals in their territory. Our female participants' statements are consistent with leisure and gender theory that suggests women's empowerment is related to self-expression, self-esteem, and self-determination (Freysinger and Flannery 1992), increased physical strength (Brace-Govan 2004), the acquisition and mastery of specific skills (Wheaton and Tomlinson 1998), and the pleasure of defying gendered expectations about appropriate leisure pursuits (Auster 2001). Empowerment is a central characteristic of resistance that enables women to create new opportunities and identities that are not automatically assigned by traditional gender norms (Shaw 2001). This was true for our female DIYers who stated that DIY activities enhanced their feelings of authority in a domain mostly occupied by men. Empowerment as a motivational force has received scant attention in the marketing literature, but could offer insights into DIYers' make or buy decisions.

Constructing an identity as a craftsman

Female participants emphasized their achieving a sense of empowerment through various DIY tasks, but our male participants did not mention empowerment. Instead, some men, like Bob, felt personal fulfillment and viewed their completed DIY projects as a reflection of their ability as craftsmen, whereas others, like Bert, enjoyed the fact that a completed DIY project called attention to their craftsmanship.

> It's creating something, seeing the finished product. Doing something what most people can't do. Most people would rather pay someone to do it. And it is involving some special skills and tools most people don't have. It took me a while to build my stairs, but it was cool to walk on it after it was done. (Bob, age 24)

> The cool thing is that I can say that I built this with my own hands. Part of it is also pride in the ability of building something like that. A project like that attracts a lot of attention and acts as a conversation starter; it shows what you can do. (Bert, age 31)

Craftsmanship provides "men with the opportunity to recapture the pride that went along with doing a task from start to finish with one's own hands" (Gelber 1997, p. 68). The ideal of a craftsman is popularized in television shows such as Tim Allen's *Home Improvement*, which emphasizes the importance of doing construction tasks to earn acknowledgment from friends, neighbors, and family members. The lead character's obsession with power tools reflects a desire for power and status through crafting. Tools symbolize crafting ability and autonomy in a setting where a man can distinguish himself from other men (Bridenbaugh 1950). Mechanized tools and machines form a contemporary version of the craftsman archetype, and people who identify with this archetype may search for ways to establish themselves as someone who exercises personal influence over all the processes involved in the manufacture of goods by choosing the design, selecting the materials, and then making the product (Campbell 2005).

Being part of a DIY community

Another reason that people engage in DIY behavior is because it connects them with others. A number of our interview participants reported that they started DIY projects to be with family, friends, or loved ones.

> I built the deck during the summer. I was outside with some friends who helped me at various points. I ended up going back and redoing some of their work, but it was fun. (Tommy, age 41)

> See, I'm also doing things in the neighborhood like mowing lawns and keeping things nice. We only charge cost because we use our lawn mowers and gas and tools. I'm retired and can be active and be outside. My wife is at work during the day so I get to do stuff and I get to be around people. Often we tell each other things that bring up new ideas. Oh yeah, we always share ideas (Charles, age 62)

Another participant reported that remodeling a room in the house counts as family time that includes husband, wife, and their five-year-old daughter. Charles (above) stated that he engaged in small projects in the neighborhood to communicate and spend time with neighbors while his wife was at work. An additional benefit he derives from meeting people through DIY is to share ideas with others about DIY projects.

The need for uniqueness

A fourth way for consumers to enhance and maintain their identity is by reducing the threat of being similar to others

by creating unique items. The desire to be unique motivated Charles to design his project to look different from his neighbors'.

> I had this idea of building a Tiki bar. For months I have been eyeballing it and seen some of my neighbors putting up outside bars for entertaining family and friends. But see, theirs looked all nice and cookie cutter. I didn't want that. I didn't want the same thing everybody has. I wanted it different, not too perfect, and a little rough on the edges. Don't get me wrong, I wanted it to be nice, just, not the same old stuff everybody has in their yard. And mine is different, because I used wood and logs that I fished out of the water. It does not get any more different. (Charles, age 62)

Conceptual models of social nonconformity recognize behaviors that make a person different relative to other people (Lynn and Harris 1997; Nail 1986). The motivation for counter-conformity arises when an individual perceives that they are very similar to others and their personal identity is threatened (Snyder and Fromkin 1977). People can distinguish themselves from others through their behaviors, but also through products that offer symbolic meaning beyond their functional benefits (Ligas 2000). Because possessions can act as extensions of the self, one way that consumers satisfy their need for uniqueness is by acquiring and possessing unique consumer products (Belk 1988). Uniqueness can be achieved not only by acquiring and displaying novelty and handcrafted goods, but also by personalizing items through the personal design and alteration of common products (Tian et al. 2001; Johnson and Wilson 2005).

No matter what the project, DIY offers tremendous opportunities to personalize self-made products. For example, by collecting building materials from the nearby river, Charles increased the uniqueness of his project and made imitation difficult. An interesting aspect derived from this observation is that DIYers deliberately may choose alternative materials and designs for their projects, including materials that might otherwise be described as junk or trash. Studying DIY behavior based on using old or used materials could generate new insights regarding consumers' innovative behavior, sustainable consumption, and even new product ideas and designs. Based on the information related to identity enhancement and maintenance drawn from our literature review and depth interviews, we propose that:

Proposition 2 Consumers who engage in DIY behavior are motivated by a desire to enhance aspects of their identity, including:

a) achieving a sense of empowerment
b) constructing an identity as a craftsman
c) being a part of a community
d) a need for uniqueness

DIY purchases

After DIYers weigh the benefits and decide to undertake a DIY project, they typically must purchase materials for their projects. Purchase decisions for larger projects can be complex, and it can be difficult to know exactly what kinds of materials and what quantities are needed. This is particularly evident when projects evolve over time due to issues such as unforeseen circumstances (e.g., more material must be replaced or repaired than initially expected), changes in plans or the scope of the project, or changes in the methods used to complete a project. Multiple visits to home improvement retailers may be required, both to procure materials and to obtain ideas for what materials are available and how they might fit into a project. This purchase process is unlike most traditional purchases due to the degree of consumer involvement and the evolving nature of the project and the materials required.

Few of our study participants reported that they finalized plans or made purchases without first shopping at home improvement retailers to help with plan visualization, and nearly all reported browsing at retailers repeatedly before a purchase was made. DIYers may need to see or feel the actual product (Peck and Wiggins 2006) or evaluate the sizes and types of materials. Consequently, DIY project-related purchases likely are moderated by a DIYer's ability to use the retail environment to stimulate ideas and project plans, which has implications for home improvement and other DIY retailers.

Between the decision to DIY and materials purchase: the moderating role of project planning and visualizing

Planning the project

Media such as the Internet, books, and TV shows are used by our DIY study participants to obtain information for project planning. However, and as described above, during our interviews we became aware that interactions with retail environments also play an important role for planning DIY projects. Customers may visit DIY retailers repeatedly to help plan their projects, e.g., to determine available options regarding colors, styles, materials, and measurements.

> I know I have an idea but need more details. I'm limited in planning my project when I'm standing in my bathroom looking around. I might picture a new vanity but have no clue whether other accessories fit the style and size. I need to see what's available in

> color, size and style. I went to three different places [home improvement retailers] to verify that I can do all the things I had in mind. (Bert, age 31)

Most of our participants said that visiting DIY retail environments, examining home improvement products closely, and imagining the appearance of their DIY projects with these products helped to focus plans.

> The best ideas come from walking and looking around in those stores. I can show you so many things in the coffee shop [I own] and the kitchen that [resulted] from me browsing: this countertop, the rod for the coffee roaster, etc. I have something in my head and don't know how to approach it. Then I just browse through the aisles and if I see something that fits my project, it may click. (Sam, age 43)

As other examples, Bob reported that browsing at Home Depot makes him think about future projects in his house. Judy states that "whenever I walk into Lowe's I'm like a kid in the candy store…too many ideas come into my head for things I want to do." Steve disclosed that

> I go to Home Depot all the time and lay out a plan with what I need and what is available. I look at all those things and place them in my house, at least in my head. I think this would look good here and that would look good there. (Steve, age 39)

For our study participants, visits to home improvement retailers are not merely for seeking information about new products and trends (Bloch et al. 1986), nor is it merely hedonic satisfaction, i.e., shopping as a pleasurable experience in its own right (Arnold and Reynolds 2003). Rather, DIY retail environments offer a context for consumers to formulate ideas about their projects. The products (raw materials and manufactured products) available at DIY retailers appear to encourage shoppers to visualize their DIY projects while they are in the store. Because DIYers often are seeking the solution to an existing problem, the sight of specific items while browsing appears to help generate plausible solutions, both for current and future projects.

Browsing at DIY retailers

Specialty stores often serve as a place for consumers with similar interests to interact, and this also appears true for DIYers in home improvement retailers. Our interview participants reported that the retail environment offered a way to share projects and ideas with knowledgeable store personnel and other DIYers. Participants stated that their encounters with store personnel in hardware stores often go beyond the typical questions about finding a certain item. Store personnel would engage in conversations by asking for details about the customer's project and then using their own problem-solving experience to give advice. Such encounters represent processes where both parties interact and mutually co-create experiences (Payne et al. 2009).

> Just the other day I went into ACE Hardware. The guy there had a similar project as mine. So we talked about all the troubles we were running into. The time I spent talking I probably should have used on my project [laughter]. (Simon, age 34)

Several interviewees told stories where, following the exchange of ideas with store personnel or other customers, they left the store without a purchase and postponed purchases until they could incorporate ideas from their recent exchange. Judy for example was looking for a corner molding piece for her shower project. After retail staff suggested a ceramic instead of a wood solution, she left the store to consider the new information. Bert indicated that his few first visits rarely end in a purchase. Visits to retail stores can take place at various stages of a DIY project but are most frequent during a project's initial stage when multiple assessments of product options, prices, availability, and measurements are required. These visits are shown in Fig. 1 by a two-way arrow that reflects the sequence of visiting a DIY retailer, obtaining information, considering that information, making a plan, and then returning to the retailer. This form of iterative problem solving appears to promote consumers' emotional engagement with the retail environment and embeds the retail space into the consumption experience (Payne et al. 2009). The back and forth interaction between retailers and consumers is a key element of service-dominant logic that enhances co-creation and dialog within the relationship (Ballantyne and Varey 2008). The complex nature of typical DIY projects often create the need for numerous purchase decisions, and visits to retail stores offer a necessary context for the interplay of project planning, idea generation, and visualization. The role of DIY retailers for consumers' DIY projects suggests the following proposition:

Proposition 3 The relationship between the decision to DIY and purchases of DIY project materials is moderated by

a) project planning
b) browsing at DIY retailers

The outcomes of DIY behaviors

Consumers can create valuable experiences beyond the consumption of a tangible product by learning how to use, maintain, and adapt the product to their unique needs and usage situations (Vargo and Lusch 2004). All study

participants communicated strong emotions about completed DIY projects; it was particularly interesting that the majority did not elaborate on the utility of the finished product, but rather the excitement and passion they derived from completing the project. Therefore, Fig. 1 shows that DIY behavior is related to higher-order values that go beyond the creation of physical or monetary value (Holbrook 2006). These outcomes can be described as desired end-states such as happiness, security, and pleasure (Rokeach 1973), which are powerful forces that govern the behaviors of individuals in all aspects of their lives (Kahle 1983). More specifically, the DIYers in our study reported elevated senses of accomplishment, control, and enjoyment derived from their DIY activities. We designate these as DIY Outcomes and describe them below.

Sense of accomplishment

Each participant's reaction to the finished project was an elevated sense of accomplishment. Despite planning, designing, and constructing projects from the beginning, the complexity of their projects did not strike the DIYers until arriving at the final stage, at which time every participant reported feeling a sense of accomplishment due to a raised awareness about their potential and capabilities for further DIY projects.

> You feel a sense of achievement. Also, and this continues to this day, sometimes you go out and think—wow, I built this! It is something that may not outlast me, but it's certainly something that's gonna be around for 10 or 20 years. It will probably last longer than I'll own the house. Doing these kinds of things always make me realize the things one can do. (Tommy, age 41)

People who seek a sense of accomplishment place themselves in situations where this value can be attained (Kahle 1983; Rokeach 1973) and carry an elevated sense of accomplishment and self-worth arising from the realization of one's talents, capabilities, and potentials (Freitas and Higgins 2002).

Control

A second outcome that informants reported concerned the mastery of their projects. By facing new projects and unforeseen difficulties without involving marketplace professionals, study participants said that DIY gave them control of their living spaces and lives.

> When I start something new, it is like climbing a hill. I want to do this. I want to say that I did it. I think it is more like I want to say with confidence that I did that, that I can do that. Because some people make claims of things they have never done. I like the idea of having the confidence and knowing that I can do it by myself. (Jim, age 57)

Control most often is associated with personal mastery of situations, which means that one is effective at fulfilling goals (Lusch et al. 1992, 2007). DIY allows people to take charge of a part of their environment that typically is controlled by others. Not only does DIY imply a physical solution to a problem within one's home, it also becomes a part of the extended self (Belk 1988). An individual who finishes a DIY project has affirmed mastery of the task similar to when "a mountain climber in reaching a peak has asserted control of the mountain and the panorama it affords" (Belk 1988, p. 150).

Enjoyment

Another outcome identified by all interview participants was that their DIY projects were enjoyable in some way, regardless of any disappointment or unexpected problem encountered during projects. Although it seemed difficult for our participants to pinpoint specifics, enjoyment arose when the task was completed without pressure, different from the everyday work routine, and perceived as relaxing.

> I really enjoyed every bit of it, but I wish I wasn't under the gun to get it done so fast. Having to live in it [the house] while you are remodeling was tough but doable. I was trying to get the business going at the time, but if I could do it on my terms I'd enjoy it even more. (Sam, age 43)

If occupational work becomes increasingly desk oriented and monotonous, then people are more likely to engage in physical activities such as the self-production that characterizes prosumers (Toffler 1980). Activities such as gardening, gourmet cooking, personal fitness training, education, and learning new skills offer psychic benefits that are associated with enjoyment (Lusch et al. 2007). Consumers who engage in DIY behavior often do so for enjoyment rather than for receiving an external reward such as money (Deci et al. 1999; Holbrook 2006; Lepper and Henderlong 2000).

Kotler (1986a, b) describes consumers' increasing their participation in the production process but does not advance the outcomes of such engagement beyond a physical product. Xie et al. (2008) explore the antecedents of the decision to engage in production, but do not consider the outcomes. Therefore, we consider the outcomes of DIY behavior and propose that:

Proposition 4 Consumers who engage in DIY behavior obtain outcomes that include senses of

a) accomplishment
b) control
c) enjoyment

Between DIY behavior and outcomes: the mediating role of project satisfaction

In a DIY context, project satisfaction can be defined as the degree to which a completed project meets a DIYer's expectations and is predicted to mediate the relationship between DIY behaviors and outcomes (see Fig. 1). Participants who had their expectations for the project confirmed tended to evaluate their experience more positively and elaborated on their feelings of accomplishment. DIY projects that did not meet DIYers' expectations resulted in a less positive evaluation and reduced satisfaction with the project. Less satisfied individuals did not count their experience as a great accomplishment but still were eager to undertake future projects. A less satisfying experience was viewed as a learning experience and simply a part of the DIY process. In the following quote, Jim expressed his frustration about some DIY projects and his realization that he had reached his limits and might have to consult a professional. While it has not prevented him from working on other projects, he evaluated such projects as "just not the same" as if he had done it himself.

> I have messed up plenty of times—I accept that. I say "alright." When I was younger I threw a wrench at the car. I would be so frustrated with not making this happen. I would scream and blame the metal and get angry at the screws. But that's the time when you have to realize that you may want to get someone [a professional]. It is just not the same as if I had finished it, though. (Jim, age 57)

Carmen shared a similar experience and stated that overly high expectations can lead to disappointment about the project, yet add to the experience in the long run.

> I regretted that I had started a project. When I painted the outside of my house I was much more involved than I thought. It took much longer, was more expensive, and didn't come out as I thought it would. I totally miscalculated it, but I'll be smarter next time. (Carmen, age 40)

People typically use expectations regarding characteristics such as quality and value to evaluate their satisfaction with purchased products (Zeithaml 1988; Fornell et al. 1996), and it is important to note that, despite producing their own goods and services, respondents use the same evaluations for determining satisfaction with their own projects. This observation suggests that:

Proposition 5 DIYers' perceptions of project satisfaction mediates the relationship between DIY behaviors and DIY outcomes.

Discussion

DIY behavior has become an important part of many consumers' lives that—because it offers consumers make or buy decisions—expands the meaning of consumerism, so there is value to understanding what motivates consumers to undertake DIY projects and what benefits they obtain. We develop a model of the motivators and outcomes of DIY behavior that is informed by a depth interview study and, where it exists, linked to the appropriate literature. The purpose of developing this model is to improve our understanding of a large consumer segment that behaves differently than typical consumers in many ways. In addition to the model, this article offers further contributions to consumer theory including a definition of DIY behavior and a depth interview study and multidisciplinary literature review that inform an exploration of the motivators and outcomes of DIY behaviors.

Our study of DIY behavior calls attention to an underdeveloped and understudied domain where consumers add value to a product. DIY behavior goes beyond the interpretive process of consumer value creation that occurs when consuming works of art, books, and films, because such behavior involves consumers' mental and physical engagement in acts of planning, designing, and fabricating for self consumption. By physically making things, a DIYer becomes the designer, builder, and evaluator of a project that is experientially consumed both during production and after its completion. Given the focal role of products for consumer behavior, DIY behavior takes on greater meaning than the functional value of the project and derives from a more complex set of motivations than is recognized in previous literature.

The conceptual framework developed in this article also adds to the existing discussion of the co-production and co-creation of value. It confirms the central idea that exchange is not about goods and services but rather the competencies of the parties involved (Lusch et al. 2007). DIY behaviors and products should be viewed as mechanisms for transferring and applying competencies. Service dominant logic argues that value only can be determined by the user in the consumption process (Vargo and Lusch 2004). The DIY marketplace makes a value proposition that, when accepted, can result in a value framework that goes beyond material values, and thereby offers an opportunity to study alternative consumer motivations and goals. Specifically, the marketplace derived motivations for DIY suggested by our study and literature review are the economic benefits, a lack of product quality, a lack of product availability, and a need for customization. Motivations that derive from identity enhancement include fulfillment of craftsmanship, empowerment, community seeking, and the need for uniqueness. These motivations present a range of reasons for DIY that go beyond

the notion that such behaviors arise strictly from economic necessity. Similarly, the outcomes of DIY behavior (a sense of accomplishment, control, and enjoyment) also extend notions of typical consumer values.

Implications for future research

Our study and propositions suggest numerous opportunities for future research. Because the theory associated with DIY behavior is not well developed, our model considers only the motivators and outcomes of DIY behaviors described either by our depth interview study or in the scant previous literature. Future studies could both validate the motivations and outcomes we propose and search for additional motivations and outcomes to better understand DIY behaviors. Similarly, the effects on purchasing patterns due to segmentation variables such as the degree of consumer engagement with DIY activities (e.g., building furniture from scratch vs. assembly from a kit), demographic and psychographic variables, and personal values also could be studied. Individuals may value their own products more highly than traditional marketplace offerings due to the effort required to build them (cf., Festinger 1957; Norton et al. 2011). Consequently, when projects are too complicated and professionals must be hired, DIYers may be willing to pay a premium so that they can contribute to the work on projects. Another idea is studying trends in DIY behavior, such as whether the DIY industry grows during periods when the economy is weak, and the factors that encourage consumers to continue being DIYers once they engage in these behaviors. Lastly, some of the constructs we describe are new to consumer behavior and require the development of original measurement scales for empirical relationship testing. This may be challenging for DIY-related constructs because consideration must be given to consumers planning, designing, and fabricating their own products, rather than purchasing traditional marketplace offerings.

To expand on the idea that other variables could be used to segment DIYers, one of the more useful examples of such variables may be gender. For example, the female study participants indicated that they were motivated by empowerment whereas males focused on their identities as craftsmen, which suggests gender differences in DIY outcomes that could have implications for DIY-related consumption. As a specific instance, viewing empowerment as a force that guides female consumers' decision making behavior has not received attention in the business literature. Their current role as wage earners and consumers has American women responsible for purchase decisions worth over $4.3 trillion annually (Silverstein and Sayre 2009). Further exploration may reveal other consumer decisions that are based on seeking an enhanced sense of empowerment. Similarly, some DIYers produce their own products to differentiate themselves from others, and our findings suggest that individuals may go much further when seeking uniqueness than previously anticipated. Consumer use-innovativeness also may be relevant for DIY, such as when DIYers who seek high levels of uniqueness use materials that others reject to increase the likelihood of differentiation.

The propositions we forward to describe DIYers suggest various behavioral differences when compared to consumers in the traditional marketplace and provide a starting point for researchers to revisit traditional consumption models. For example, we propose that DIYers are motivated by market related factors, two of which are a lack of product quality and a lack of availability in the marketplace. Consumer responses to poor quality and unavailable products are well documented in the retailing, consumer behavior, and operations literatures (e.g., Sloot and Verhoef 2008; Voorhees et al. 2006), but DIY behavior is an alternative consumer response to marketplace shortcomings that is unexplored in existing literature. The preference for customized products also is an important motivator for our depth-interview participants, yet the customization literature typically focuses exclusively on firms' opportunities to provide customized products to customers rather than their preferences. There can be a disconnect between the customers' ability to communicate preferences and the firm that provides those customized offerings (Franke et al. 2009). Studying self-customization efforts may help marketers understand the underlying mechanisms that prevent or encourage DIYers from seeking marketplace offerings for meeting custom needs.

Our conceptual model incorporates the proposition that the relationship between a decision to undertake a DIY project and subsequent purchase decisions is moderated by planning and visualization in retail environments. Many of our sample of DIYers browsed at retail environments prior to beginning a project, but they rarely purchased anything on their first visit. The visits to DIY retailers suggest that consumers can develop an emotional engagement with the retail environment that embeds the retail space into the co-creation experience and also may have implications for customer engagement.

DIYers appear to create value through both the creation and consumption of their self-production. Therefore, value creation is not limited to consumers learning to use, maintain, and adapt goods (Vargo and Lusch 2004) but moves to consumers learning how to produce and consume their own products. However, other forms of value are interwoven throughout our model and discussion. For example, we propose a few DIY outcomes (a sense of accomplishment, control, and enjoyment) that are not typical consumer values but instead are higher-order outcomes (Holbrook 2006). Economic value is a DIY motivator that also could be an outcome of such behavior, although—consistent with Xie et

al. (2008)—our study participants focused primarily on the process of DIY projects and the higher-order outcomes rather than the economic value and physical product. Nonetheless, the various forms of values justify further study to better understand which motivate DIY behaviors and which are the outcomes, and under what circumstances.

Lastly, the concept of the prosumer deserves further attention. More than 20 years have passed since Kotler (1986a, b) published his ideas on prosumption, yet previous research has contributed little to understanding prosumers' behaviors, motivations, and outcomes. Our research suggests that prosumption activities such as DIY projects have roots beyond the traditional economic motivations, and understanding these motivations may have important implications for DIY retailers who can emphasize alternative benefits from DIY behavior. Toffler (1980) presents several arguments that prophesy future prosumption growth, including a decline in the workweek, scarcity of jobs, the rising cost of skilled labor, routinized work, poor quality workmanship, and individuation of one's own products. This growing segment deserves further study and marketing researchers and managers should prepare for trends that reflect shifts from purchasing goods and services to DIYing them.

Managerial implications

Our study and model have several important implications for marketing managers, most of which concern DIY retailers and traditional service providers. The first implication is that consumers who produce their own goods and services extend the traditional view of consumers as the buyers and users of products. This suggests a range of co-production options, such as retailers who inform and educate customers about DIY skills and home improvement materials. Home Depot, for example, offers demonstrations that show customers how to lay tiles or build a deck. Another example is that contractors could work with DIYers who want professional advice rather than having the project done for them. Such a service would be invaluable for DIYers because they could learn new DIY skills and attempt more complicated projects than they might otherwise, with the knowledge that they can hire someone to oversee a project and give advice where needed.

Second, a trend that has consumers shifting from conventional consumption to self-production should concern many traditional retailers and service professionals. Typical consumer responses to stock-outs, unavailability, poor quality, and overly standardized goods and services are assumed to include negative word of mouth, boycotts, or switching behavior. Largely ignored is consumers' ability to create their own goods and services through DIY behaviors, and retailers and service providers need to be aware that consumers can be motivated to DIY by marketplace conditions. Although the direct loss to a firm's profits may not be serious in the short term, managers should understand that as DIYers gain experience, they also may be more likely to consider the DIY option for other products, so the loss to sales could be wide spread and long term.

Third, the finding that DIYers also engage in self production for identity enhancement reasons may not be surprising. However, current DIY marketing strategies typically focus solely on the economic benefits of DIY projects and not consumers' identities. Marketers should consider strategies that emphasize customers enhancing their identities through DIY projects. For example, by outlining the characteristics of a craftsman, retailers such as Home Depot and Lowe's may encourage customers to seek challenges in home improvement projects. The different motivations for DIY behaviors indicate the possibility of a variety of DIYer segments. For example, marketers may find it useful to know that our female study participants felt empowered while doing DIY tasks. Given the central role of empowerment and the rising trend of single female home ownership, marketers who target women DIYers may offer new opportunities to those who seek self empowering projects. Marketing managers also could examine whether women have different DIY product and retailing preferences (e.g., tool sizes and brands such as Martha Stewart).

Fourth, the study results indicate that viewing the goods and raw materials in DIY stores supports the development of current and future DIY projects and provides solutions to existing DIY problems. Visits to DIY retailers are important for understanding what is possible for DIY projects. DIY retail environments can offer consumers a place to engage their imaginations, conceive new projects, and to visualize the specifications and work processes needed to complete these projects. This means that product displays are important, and partially- and fully-assembled portions of typical DIY projects could serve to stimulate DIYers' thought processes and purchase decisions. Although DIYers may not make a purchase every visit, we expect that the more often they visit a retailer, the more they will purchase when project decisions are made. The interaction between DIY customers and retailers appears unlike typical customer-retailer relationships.

The DIY retail environment also provides a meeting place for like-minded consumers to share project ideas and experiences, and DIY retail spaces can serve as a community center for DIY enthusiasts. Store personnel, as part of the retail environment, can engage patrons in conversations about their projects. Both parties can exchange their ideas and offer project-specific knowledge and solutions. That DIYers seek out store staff with whom they can share ideas and projects emphasizes the need to hire personnel with DIY experience. Retail personnel who share their experience

and give advice can contribute to the positive completion of and experience with DIY projects. Such interactions can strengthen ties to the retailer and enhance loyalty and word of mouth to create a competitive advantage (Brown et al. 2005; Lusch et al. 2007). In turn, DIYers who communicate frequently with retail personnel can offer ideas that may improve the retailer's offerings.

A finding from our depth interviews is that DIY behavior can take on greater meaning than the functional or aesthetic value of the project. Study participants voiced feelings of accomplishment, control, and enjoyment when completing their projects. By producing their own products, DIYers move from a concrete level of product attributes to the positive benefits provided by co-producing and consuming the product, and then on to a higher level of abstraction that is personal value (Reynolds 1985). Important for the development of these outcomes is the satisfaction from completing a DIY project successfully. This suggests that managers in the DIY industry should attend carefully to strategies for managing customers' perceptions of project satisfaction, perhaps by emphasizing outcomes that encourage DIY behaviors in marketing communications.

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