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The Psychological Effects of Empowerment Strategies on Consumers' Product Demand *

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ABSTRACT

Companies have recently begun to use the Internet in order to integrate their customers more actively into various phases of the new product development (NPD) process. One such strategy involves empowering customers to cooperate in selecting the product concepts to be marketed by the firm. In such scenarios, it is no longer the company but its customers who decide democratically which products should be produced. This article discusses the first set of empirical studies which highlight the important psychological consequences of this power shift. The results indicate that customers who are empowered to select the products to be marketed will show stronger demand for the underlying products even though they are of identical quality in objective terms (and their subjective product evaluations are similar). This seemingly irrational finding can be observed because consumers develop a stronger feeling of psychological ownership of the products selected. The studies also identify two boundary conditions for this "empowerment – product demand" effect: It diminishes if the outcome of the joint decision-making process does not reflect consumers' preferences and if consumers do not feel that they have the relevant competence to make sound decisions.

Keywords: Empowerment, Customer Integration, Willingness to Pay, Psychological Ownership, New Product Development

Threadless, a Chicago-based fashion start-up, markets new T-shirt designs on a weekly basis. Unlike many other firms, it is not the company that determines the specific designs to be marketed, but rather its customers. Threadless has built a strong user community which rates the attractiveness of new design ideas online every week, with each design evaluated by 1,500 users on average. The highest-rated T-shirts finally make their way to the shelves (Ogawa and Piller 2006). A similar product selection strategy is also pursued by Muji, a Japanese manufacturer of consumer goods. Muji invites its avid customers to evaluate the attractiveness of new product concepts, and only those concepts which receive a substantial number of customer pre-orders ("binding votes") are ultimately integrated into one of their product lines (Ogawa and Piller 2006).

Similar initiatives have been implemented at companies across various industries, including Mountain Dew, where consumers voted at DEWmocracy.com to decide on a new flavor for its soft drink to be sold on a permanent basis; Dell, where consumers put forth a request for Linux at Ideastorm.com and Dell responded by providing the Linux operating system on certain models in its PC fleet; M&M's, which succeeded in recruiting over ten million consumers to vote on the new M&M color in 2002; and Fiat, which successfully launched a new model of the traditional Cinquecento car, involving customers from the definition of its design options to the creation of the advertising campaign. Even political parties have started to integrate users directly into their decision making processes. Austria's Green Party, for example, has empowered their user base to decide democratically on the election posters to be used in upcoming campaigns (Gruene.at).

In contrast to traditional market research, where ad-hoc input from selected customers is not binding on the firm, these organizations have systematically empowered their customer base. In more general terms, they have shifted power (i.e., that of product selection) to their customers. For the purposes of our research, we define empowerment as a strategy used by firms to give

customers a sense of control over a company's product selection process, allowing them to *collectively select* the final products the company will later sell to the *broader market.*

The rationale behind such "empowerment to select" strategies – in tandem with empowerment in various other phases of the new product development (NPD) process, including idea generation – is obvious: They should enable companies to develop better products at lower cost and risk (e.g., Dahan and Hauser 2002; Fuchs and Schreier 2009; Kalaignanam and Varadarajan 2006; Nambisan 2002; Nambisan and Nambisan 2008; Ogawa and Piller 2006; Prahalad and Ramaswamy 2000; Prandelli, Verona, and Raccagni, 2006; von Hippel 2005).

In this paper, we argue that this view of empowerment is only one side of the coin, and we aim to tackle it from a different perspective which goes beyond merely NPD-related arguments. In particular, we aim to analyze some of the psychological consequences for customers who are empowered to select the products a company should market. In a nutshell, we propose an "empowerment – product demand" effect: Controlling for the products' objective quality, we hypothesize that empowered customers will show stronger demand for the underlying products than non-empowered customers. Note that our dependent variable "demand" is conceptualized at the level of the individual customer rather than the aggregate market level; for the sake of simplicity, however, we use the term "demand" instead of "individual demand" below.

At first sight, our prediction seems to conflict with standard economic theory, as a rational actor should not exhibit increased demand in cases where the expected product benefit (and thus its value) is identical. However, we predict this seemingly irrational effect because the underlying products might be psychologically enriched by the customer's participation in the product selection process (empowered customers will assume more psychological ownership of the outcome). In the course of four experiments (overall n = 875), we find strong support for our proposed "empowerment – product demand" effect (with demand being measured in various

ways, including purchase intentions and willingness to pay [WTP] using real auctions). We also find that psychological ownership is an appropriate process variable because it fully mediates the incremental demand observed among empowered customers (Study 2). Finally, we identify two important boundary conditions: The incremental demand diminishes if the outcome of the joint decision-making process does not reflect consumers' preferences (Study 3) and if consumers do not feel that they have the relevant competence to make sound decisions (Study 4).

THEORY AND HYPOTHESES

Background and Overview

In recent years, it has been argued that customers are gaining power because markets are becoming more transparent, competition is increasing, and consumers can easily retrieve information about potential suppliers and their products from the Web (e.g., Harrison, Waite, and Hunter 2006; Prahalad and Ramaswamy 2000). In short, it is assumed that customers are empowered because they have more information and choice. This provides increased power in relation to suppliers, thus affording customers more autonomy (Harrison, Waite, and Hunter 2006; Wathieu et al. 2002). From an economic perspective, this classic view of empowerment is perceived as a benefit, as consumers' needs should be better satisfied by the marketplace (Kreps 1979).

Overall, this perspective on empowerment focuses on the market level (e.g., how many suppliers are on the market, and how accessible the information is to consumers). It does not, however, affect the fundamental nature of interactions between an individual firm and its customers (firm-level perspective). From the latter point of view, power has traditionally been concentrated on the supplier side, and companies have typically been exclusively responsible for deciding which products should be marketed (Samli 2001). Although companies have listened

closely to the voice of the customer, power and control have been strictly centralized, as the companies ultimately had the final word on what should be produced (Pitt et al. 2006).

Consumers do not always accept this imbalance of power. In fact, they are frequently observed to complain that companies exert too much control over their daily lives, and many have begun to strive for more active participation in the marketplace (Bernstein et al. 2000; Holt 2002). Although management scholars have long advocated the active integration of customers almost as "partial employees" in firms' decision-making processes (Mills and Morris 1986; Ulrich 1989), empowerment tendencies have only recently reached the firm level on a broad basis. This shift has been facilitated by the Internet, which allows companies to build strong communities in order to integrate thousands of customers from all over the world (Ogawa and Piller 2006).

As argued above, the main arguments in favor of empowerment strategies in NPD have so far been tied to the "objective" nature of the products (better products at lower cost and risk). In addition, scholars have also started to recognize that shifting certain types of power to consumers may also have "indirect" effects. For example, Nambisan and Nambisan (2008, p. 53) point out that empowerment strategies can "offer important (and often hidden) benefits beyond the innovation outcomes." In a similar vein, Sawhney, Verona, and Prandelli (2005) note that empowered customers might feel a closer relationship to the underlying products and might therefore be more willing to buy them. We use these ideas as a starting point for our research. In the following, we first define the notion of empowerment for our research context and then develop the proposed "empowerment – product demand" effect.

Empowerment: A Definition

In line with the previous discussion, Taylor et al. (1992) distinguish between empowerment under the market approach (allowing customers to choose between alternatives offered by the market) and under the democratic approach: here, empowerment is generally seen as a

"(co)creative force that structures the possible field of interaction and exchange of free agents" (Denegri-Knott, Zwick, and Schroeder, 2006, p. 961). In particular, firms might use empowerment as a strategy to give their customers a voice in – and an opportunity to change – a company's general offerings (Ramani and Kumar 2008). Consistent with this democratic approach, we define empowerment as a strategy used by firms to give customers a sense of control over a company's product selection process, allowing them to *collectively select* the final products the company will later sell to the *broader market.*

Note that such "empowerment to select" strategies are related to but conceptually and practically distinct from other Web-enabled strategies such as mass customization, where every single customer is empowered to design her own product online, which the manufacturer then produces to order. Here, the company sells one product per customer. This strategy pays off if the extra cost of producing single-unit quantities is offset by the extra value customized products deliver to customers (Franke, Keinz, and Steger 2009; Franke and Piller 2004; Franke and Schreier 2008). On the one hand, one could argue that mass customization might be psychologically more powerful because customers *design* a unique product themselves, which will give them stronger feelings of accomplishment ("I designed it myself") (Franke, Schreier, and Kaiser 2009) compared to merely *voting* for the most preferred products out of a set of standards created by the company. On the other hand, the individual solutions are *not* put into full-scale production, and customers do *not* impact the company's actions beyond the individual transaction. We believe that it is this latter aspect in particular that might bring about the unique outcomes of "empowerment to select" strategies.

The "Empowerment – Product Demand" Effect

Our key hypothesis is that empowered customers will show stronger demand for the underlying products than non-empowered customers (measured in terms of WTP and purchase

intentions). We expect this effect to arise even if we *control* for the objective properties of the products. We also assume that there is *not* a certain magic at work which changes the consumers' subjective evaluations of the underlying products (i.e., that empowered customers evaluate the underlying products more favorably than non-empowered customers). Instead, this prediction can be derived because the underlying products might be psychologically enriched by the customer's participation in the product selection process. Empowered customers might take on more psychological ownership of the outcome, which in turn might increase demand.

First, we assume that "empowerment to select" strategies allow customers to experience the feeling of "having an impact" (the direct psychological outcome of empowerment strategies). Perceived impact refers to the degree to which one *perceives* his or her own ability to influence certain outcomes (Spreitzer 1995). It appears very plausible that empowered customers will feel that they have a stronger impact on a company and its actions compared to non-empowered customers, who have nearly no say in a firm's product selection process.

Second, because of their ability to participate in this decision-making process (having an impact), we expect empowered customers to associate a certain "trophy component" with the underlying product (Wathieu et al. 2002, p. 301). In particular, increased beliefs of self-efficacy (a "can do" attitude) and increased feelings of responsibility might lead to stronger feelings of ownership (Pierce, Kostova, and Dirks 2001). This is consistent with Ulrich (1989), who argued already two decades ago that firms which empower customers in NPD (e.g., by allowing them to help choose the products to be launched) will benefit from positive psychological outcomes, such as the customers' "immediate commitment to the finished product" (p. 24). This is also consistent with the literature on empowerment in general: When individuals are allowed to participate actively in decision-making and perceive that they may influence the outcome, the final decisions become "their decisions" (Agarwal and Ramaswami 1993; Hunton 1996). In other words,

individuals assume psychological ownership of such decisions because they are partly responsible for the outcome, and this tends to elicit positive feelings (Barki and Hartwick 1994; Hui and Bateson 1991). Psychological ownership – which may exist in absence of legal ownership – refers to "the state in which individuals feel as though the target of ownership or a piece of that target is 'theirs'" (Pierce, Kostova, and Dirks 2003, p. 86). It thus manifests itself in a certain relationship perceived between an individual and an object (i.e., there is a psychological link between the self and the object; Furby 1978; Pierce, Kostova, and Dirks 2001).

Finally, it is well established that such feelings of ownership might increase the perceived value of the object ("endowment effect"; Thaler 1980). This holds true for both legal and psychological ownership. In short, it is argued that ownership triggers feelings of loss, which leads to a situation in which sellers demand and buyers pay higher prices. Peck and Shu (2009), for example, have recently shown that consumers who felt a strong sense of psychological ownership of products exhibited stronger demand for them (measured in terms of WTP). On the basis of this idea, we expect empowered customers to show stronger demand for the underlying products than non-empowered customers because participation in the product selection process will induce strong feelings of psychological ownership.

H1: Empowered customers (who participate in the new product selection process) will show stronger demand for the underlying final products than non-empowered customers (who do not participate in the new product selection process; measured in terms of WTP and purchase intentions).

H2a: Empowered customers (who participate in the new product selection process) will experience higher levels of psychological ownership of the underlying final products than non-empowered customers (who do not participate in the new product selection process).

H2b: The "empowerment – product demand" effect (H1) can be explained (is mediated) by psychological ownership (H2a).

STUDY 1

Method

Design and procedure. In Study 1, we primarily aim to test whether empowerment leads to higher product demand (H1). We devised a one-factor between-subject design with one experimental and three control groups. On the basis of real-world examples (Threadless), we chose to study T-shirts as the underlying product category. A total of 264 undergraduate students from four parallel classes (i.e., the same subject and year of study) at a European university participated in our experiment. The four classes were randomly assigned to the treatment group or to one of three control groups.

At *time 1*, participants of all four groups were asked to participate in a real-world market research study for a new foreign fashion brand specializing in T-shirts. The brand name was not revealed, and participants were informed that the outcome of the study would help the company decide whether and how they should enter the market in question. One of the unique things about this brand, as participants were then told, is that the company can draw on a strong and very large network of international designers who submit new T-shirt designs every week. On this basis, the company markets five new limited-edition T-shirts per week. After receiving these concrete and vivid instructions, participants were shown five sample T-shirts which had been selected for production in the recent past and then asked to complete a short initial questionnaire containing items related to their evaluation of the products (based on the five sample T-shirts), their overall evaluation of the company, and their income. These control variables will be used to analyze whether our randomization procedures were effective. If there are no related significant differences between groups, we can assume that any differences in the dependent variables can be attributed to our manipulation rather than differing sample characteristics.

The initial questionnaire was followed by group-specific information (treatment) related to the company's process of selecting new T-shirts. Participants in Group 1 (n = 76) were exposed to the "empowerment to select" treatment. They were informed that the company regularly asks

their user community to rate the set of potential T-shirts in terms of attractiveness. Each week, the company markets the five T-shirts which receive the best scores. Participants were then instructed to look at 20 prototype T-shirts (of which only five would be marketed in the coming week) and to participate in the T-shirt rating task. In this way, the members of Group 1 actively participated in the selection process for the next week's T-shirts; they and the community jointly decided which T-shirts would make their way to the shelves. The 20 T-shirt designs were taken from Threadless and delivered to the participants on color printouts. Participants were instructed to look at all of the T-shirts first, then to complete the rating questions provided immediately after each T-shirt (single-item question on a five-point scale where 1 = "I do not like this T-shirt at all" and 5 = "I like this T-shirt very much").

Group 2 (n = 60) was the first control group. Participants in this group received the same information as those in Group 1 (the company fosters selection empowerment by asking its user community to rate 20 prototype T-shirts, of which only five are marketed in the ensuing week, etc.). However, the participants in this group were *not* empowered to participate in the selection process (and they were *not* shown the 20 prototype T-shirts). From a practical perspective, contrasting Groups 1 and 2 constitutes a realistic comparison. Participants in Group 1 *actively participated* in the selection process for the new T-shirts ("you and the community decide"), while participants in Group 2 did not ("the community decides"). If our hypothesis is correct, we should observe higher scores in our dependent variable among participants in Group 1 compared to those in Group 2 (measured at *time 2*).

However, there are alternative theoretical explanations for potential differences in our dependent variable (product demand) between these two groups. Most importantly, the participants in Group 1 have seen (and evaluated) the 20 prototype T-shirts (*time 1*), whereas the participants in Group 2 have not. Theoretically, Group 1 might show stronger demand for the

underlying products (*time 2*) not because of the *specific* empowerment treatment, but simply because of repetition. They have seen the T-shirts before (*time 1*) – and might therefore like them more due to mere exposure effects or increased processing opportunities, to name just two examples (Obermiller 1985). In order to rule out these alternative explanations, we added a third group. Participants in Group 3 (n = 73) received the same treatment as those in Group 2 but were exposed to the 20 prototype T-shirts ("Now you can have a look at the 20 prototype T-shirts, only five of which will be produced next week"). Unlike the participants in Group 1, however, they were not empowered to participate in the selection process (i.e., they were not asked to rate the T-shirts). If our theory is correct, (1) we should observe differences in our dependent variable between Groups 1 and 3, and (2) we should *not* observe any differences between Groups 2 and 3. This would rule out the alternative explanation of potential differences between Groups 1 and 2.

Finally, we added Group 4 (n = 55) in order to allow a comparison between empowerment to select (Group 1) and traditional participation in market research (where the company uses customer input but still has the final word on what should be produced). This group is an important complement because research has also shown that mere participation in market research may be associated with favorable consumer behavior, including increased product demand (Borle et al. 2007). Hence, an alternative explanation for differences observed between Groups 1 and 2 / 3 might simply be the fact that the company solicits *any* product-related feedback (market research) from participants, not the specific "empowerment to select" treatment.

Participants in Group 4 were informed that the company regularly seeks a great deal of customer input through ongoing market research involving their user community, which helps the company select the T-shirts to be marketed. As in Group 1, participants were thus instructed to look at the 20 prototype T-shirts (of which only five would be marketed in the ensuing week) and to participate in the T-shirt rating task. Participants looked at all of the T-shirts first and then

completed the rating questions immediately after each T-shirt. The same single-item question as in Group 1 was used. The only difference between Groups 1 and 4 is that participants in the former group were aware that they and the community would jointly decide which T-shirts should make their way to the shelves, whereas participants in the latter group were aware that their input (together with the input from the community) would be used by the company, but that it was the company which ultimately made the decision (market research). Thus, if our predictions hold true, participants in Group 1 should feel that they have more impact, have a stronger sense of psychological ownership of the outcome, and consequently exhibit stronger demand for the relevant products than participants in Group 4. This would also be consistent with existing literature, where it has been found that direct (Group 1) but not indirect participation (Group 4) in decision-making increases one's sense of impact and brings about favorable behavior among the populations studied (Rubenowitz, Norrgren, and Tannenbaum 1983).

After the individual treatment, participants in all four groups were informed that their input would then be transferred to the company and that they would see the new five T-shirts to be marketed by the company the following week. One week later (*time 2*), the five new T-shirts were presented to participants on color printouts (all groups were exposed to the same T-shirts). We opted for a realistic selection process by choosing the five designs that received the highest scores based on the ratings from Groups 1 and 4. After inspecting the selected T-shirts, participants were asked to complete a short initial questionnaire containing items which measure perceived impact (our manipulation check of empowerment) and to evaluate the final selection of T-shirts. Finally, participants were given the opportunity to bid on one of the five T-shirts in the course of a real auction. This was done in order to capture the consumer's demand for the underlying products, which we operationalized in terms of WTP in Study 1.

Measures. In the first questionnaire (*time 1*; before treatment) we measured the control variables of product evaluations (based on the five sample T-shirts), company evaluations, and income. Product evaluations were measured using two five-point semantic differential scales ("Please evaluate these T-shirts") with the anchors "bad/good" [1;5] and "dislike/like" (taken from Edell and Keller 1989). The alpha for the scale is .82. Company evaluations were measured using the single item "I like this company," where 1 = strongly disagree and 5 = strongly agree (Hui, Dubé, and Chebat 1997). Finally, income ("How high is your disposable income per month?") was measured on a six-point scale (1 = < €200; 6 = > €600).

In the second questionnaire (*time 2*; before the bidding task) we measured the participants' product evaluations (based on the final five T-shirts) using the same measures as in the first questionnaire (alpha = .84). Perceived impact is measured using two items adapted from Spreitzer (1995) (alpha = .80): "I see that I have some control in determining which T-shirts will be produced by this company" and "I have some influence in determining which products will be sold by this company" (1 = strongly disagree and 5 = strongly agree).

Finally, we operationalized product demand as WTP in Study 1 and measured it using incentive-compatible BDM auctions (Becker, DeGroot, and Marschak 1964). Participants were told that they could participate in a real auction to win their most preferred of the five new T-shirts, and they were instructed to think carefully about their maximum WTP for their selection. Participants were also informed that one week after completion of the study, a random card (stating a random price) would be drawn from a prepared urn to determine the price to be paid. If their bid was higher than the price indicated on the card, they purchased the T-shirt, but only *at the price indicated on the card*. If, however, their bid was lower than the price indicated on the randomly drawn card, they *could not* purchase the T-shirt. Thus, our dependent variable is *not hypothetical* but constitutes real economic behavior. Furthermore, this procedure ensures

theoretical incentive compatibility: As prices are exogenous to participants' WTP, the dominant strategy should be to reveal one's "true" maximum WTP. In order to avoid anchoring distortion, subjects were *not* informed about the price range shown on the cards (Wertenbroch and Skiera 2002). Participants were then provided with a fictitious example in order to help them learn the auction procedure. They finally indicated their chosen T-shirt (of the final five T-shirts shown to them at *time 2*) and submitted sealed, binding bids (confirmed by their signatures; there was no minimum or maximum WTP). The participants were not aware of each other's bids.

Findings and Discussion

Control variables. We employed a series of ANOVAs (including post-hoc tests [LSD]) to analyze whether groups differ with regard to our control variables (see Table W1 in the Web Appendix). First, we find that the four groups did not exhibit significant differences in their product evaluations of the sample T-shirts, company evaluations, and income (all measured before treatment at *time 1*). This means that any differences in the dependent variables can be attributed to our manipulation rather than differing sample characteristics.

Second, we also find that there are no significant differences between groups with regard to the participants' evaluations of the final selection of T-shirts (measured after treatment at *time 2*). This is important because one might have argued that mere differences in taste between the groups resulted in different evaluations of the final T-shirts and may have generated differences in our dependent variable (WTP). Second, and more importantly, this finding provides initial evidence that the alternative explanations arising from repetition are not at play: Although the participants in Group 1 had already seen (and evaluated) the T-shirts at *time 1*, they did not evaluate them more favorably than participants in Group 2, who had not been exposed to the T-shirts before. Similarly, the product evaluations of participants in Group 2 are not significantly lower than those of participants in Groups 3 and 4 (both of which had seen the products before).

Manipulation check. Next, we find that our treatment was effective, as empowerment to select drives the consumers' perceived impact on the company's product selection process (see Table 1). Participants in Group 1 ("you and the community decide") report significantly higher levels of perceived impact (M = 3.54) than participants in Group 2 (M = 2.83), Group 3 (M = 2.89) and Group 4 (M = 2.78) (*p* values < .001; post-hoc tests).

Key findings. Most importantly, we find support for H1: Empowerment to select reinforces the consumer's demand for the underlying products, measured in terms of WTP (Table 1). Participants in Group 1 were willing to bid significantly more for their chosen T-shirts (M = 15.41) than participants in Group 2 (M = 9.25), Group 3 (M = 10.33) and Group 4 (M = 9.56) (*p* values < .01; post-hoc tests). As empowerment increases WTP by nearly 50 percent, the size of this effect can be considered quite substantial. It is also worth noting that there are no significant differences between the three control groups. Together with the fact that there are no significant differences between groups with regard to their evaluations of the final T-shirts, this clearly allows us to rule out the alternative explanations of higher WTP in Group 1 due to any repetition or mere market research effects. Interestingly, these findings also highlight that mere affect-based processes are very unlikely to explain the main effect on product demand (empowerment → positive mood → more favorable product evaluation → higher product demand).

[INSERT TABLE 1 ABOUT HERE]

STUDY 2

Objectives and Rationale

In Study 2, our main objective is to test whether the effect of empowerment on product demand can be explained by psychological ownership (H2a/b). Additionally, we aim to broaden the set of dependent variables in order to shed more light on the product-related consequences of

empowerment. It has been argued, for example, that "psychological ownership for a particular target may also promote feelings of responsibility that include feelings of being protective, caring, and nurturing, and the proactive assumption of responsibility for the target" (Pierce, Kostova, and Dirks 2003, p. 100). Furthermore, activities such as displaying, talking about, and enjoying the products were noted as particularly relevant to objects for which people feel strong psychological ownership (cf. Pierce, Kostova, and Dirks 2003). In a nutshell, we therefore expect that if empowerment causes an increase in psychological ownership of the outcome (i.e., the selected products), it will have a positive impact not only on the consumer's demand, but also on other variables such as positive word-of-mouth (WOM), consumers' enjoyment of using the product, and their willingness to take care of and, if necessary, to verbally defend the product in public.

We also aim to increase the external validity of the findings of Study 1 by choosing a more realistic setting (online vs. offline), by involving a more representative sample (consumer panel vs. students), and by varying the operationalization of product demand (purchase intentions and hypothetical WTP vs. WTP using BDM auctions).

Method

Design and procedure. We again used T-shirts as the underlying product category. Participants (n = 128) were recruited from a European online consumer panel and were randomly assigned to groups. We devised a one-factor between-subject design with one experimental and one control group. Similar to Study 1, participants in Group 1 (n = 65) were exposed to the "empowerment to select" treatment. Group 2 (n = 63) – our control group – was identical to the market research group in Study 1 (Group 4). As we did not identify any relevant differences between the control groups in the previous study, we decided to include only one control group in Study 2. We chose this control group because it constitutes the hardest benchmark for our treatment group with regard to the main effect on product demand.

We employed the same procedures as those used in Study 1, with the following exceptions: First, and as noted above, Study 2 was carried out online (instead of offline). Second, participants evaluated 16 T-shirts at *time 1*, of which the four highest-rated T-shirts were selected for presentation at *time 2*. Third, we came back to participants only after two weeks. These minor changes might provide additional insights for the purpose of generalization.

Measures. In the first questionnaire (*time 1*; before treatment) we employed the same measures as previously to capture the control variables of product evaluations (based on the five sample T-shirts; alpha = .89), company evaluation, and income. Due to the different sample, however, we changed the anchors for the monthly income measure (1 = < €200; 6 = > €1,800).

In the second questionnaire (*time 2*; after participants inspected the final selection of T-shirts), we employed the same items from Study 1 to measure the participants' perceived impact (manipulation check; alpha = .69) and product evaluations (alpha = .84). Psychological ownership is measured using six items (five-point scales; 1 = strongly disagree and 5 = strongly agree; adapted from Dyne and Pierce 2004; Peck and Shu 2009): "Although I do not legally own these T-shirts yet, I have the feeling that they are 'my' T-shirts," "The selected T-shirts incorporate a part of myself," "I feel that these products belong to me," "I feel connected to these T-shirts," "I feel a strong sense of closeness with these products," and "It is difficult for me to think of these T-shirts as mine" (reversed). The alpha for the scale is .95.

As noted above, we expect that if empowerment has an effect on psychological ownership, it might consequently impact other product-related outcome variables as well. Therefore, we also measured the participants' positive WOM intentions, their enjoyment of using the product and their willingness to take care of and, if necessary, to defend the product in public (all items are measured on five-point scales; 1 = strongly disagree and 5 = strongly agree). Positive WOM is measured using three items (adapted from Caroll and Ahuvia 2006; alpha = .90): "I would

recommend the products in this collection to my friends," "I would 'talk these T-shirts up' to others," and "I would try to spread the word about these products." For the other measures we used the following single items: "Compared to similar T-shirts from other firms, it would be more fun to wear these T-shirts in public," "If I owned one of these T-shirts, I would try to take better care of it than I normally would for similar clothes," and "If someone said something bad about one of these T-shirts, I would be more likely to defend it verbally than other products."

As we were not able to employ WTP measurements using BDM auctions due to legal restrictions (selling products to the panel was prohibited), we decided to measure product demand in terms of hypothetical WTP and purchase intentions. WTP is measured using the item "How much would you be willing to pay for your favorite T-shirt out of the four T-shirts selected?" (Jones 1975). For purchase intentions, we employed two measures. First, we used two five-point semantic differential scales ("Imagine you could now buy one of these T-shirts. Would you be interested in buying one?") with the anchors "improbable/probable" and "unlikely/likely" (taken from Kirmani, Sood, and Bridges 1999; alpha = .91; referred to as measure 1). Second, we used the single item developed by Juster (1966). We used the preamble "How likely is it that you would buy one of these T-shirts?" (where 1 = completely unlikely [likelihood: 1%] and 10 = almost certain [likelihood: 99%]; referred to as measure 2).

Finally, we added two items to measure the participants' future loyalty intentions toward the focal company ("My loyalty to this firm would be high," "In the future, I would prefer to buy products from this company," 1 = strongly disagree and 5 = strongly agree; based on Reynolds and Beatty 1999; alpha = .77). We did so in order to explore whether empowerment might also influence variables beyond the underlying products (and might thus have longer-term effects).

Findings and Discussion

Control variables. A series of ANOVAs revealed that there are no significant differences between groups with regard to their evaluations of the sample T-shirts, company evaluations, and income (all measured before treatment at *time 1*). Second, we also find that there are no significant differences between groups with regard to the participants' evaluations of the final set of T-shirts (measured after treatment at *time 2*; see Table W2 in the Web Appendix).

Manipulation check. Next, we also find that our treatment was effective in this context, since empowerment to select drives the consumers' perceived impact on the company's product selection process (see Table 2). An ANOVA reveals that participants in Group 1 ("you and the community decide") report significantly higher levels of perceived impact (M = 3.75) than participants in Group 2 ("market research"; M = 3.10; $p < .001$).

Key findings. First, we find support for H2a (all findings are based on ANOVAs, see Table 2): Empowerment to select impacts the consumer's feeling of psychological ownership of the final set of T-shirts. Participants in Group 1 ("you and the community decide") report significantly higher levels of psychological ownership (M = 2.86) than those in Group 2 ("market research"; M = 2.20; $p < .001$). Second, we find that participants in Group 1 (M = 20.74) indicate that they are willing to pay significantly more for the underlying products compared to participants in Group 2 (M = 17.24; $p < .05$). Similarly, participants in Group 1 also report significantly higher purchase intentions than participants in Group 2. This holds true for both measures employed (measure 1: M = 3.55 vs. M = 3.16; $p = .05$; measure 2: M = 5.71 vs. M = 4.65; $p < .05$). We were thus able to replicate the findings from Study 1 (H1). Together with the fact that there are no significant differences between groups with regard to their evaluations of the final T-shirts, these findings again highlight that mere affect-based processes are very unlikely to explain the main effect on product demand.

Third, we also find main effects on our alternative dependent variables. Empowerment to select leads to higher positive WOM intentions (Group 1: M = 3.65; Group 2 M = 3.09; $p < .01$). Participants in Group 1 versus Group 2 also indicate that they imagine it would be more fun to wear the underlying T-shirt (M = 3.74 vs. M = 3.19; $p < .01$), that they would take better care of it (M = 3.31 vs. M = 2.75; $p < .05$) and that they would be more prepared to defend it verbally in public if necessary (M = 3.12 vs. M = 2.22; $p < .001$). Finally, we find that empowerment also significantly affects future loyalty intentions (Group 1: M = 3.26 vs. Group 2: M = 2.75; $p < .01$). This suggests that empowerment might produce favorable outcomes that go beyond the underlying products, a point we will address in greater detail in our general discussion.

[INSERT TABLE 2 ABOUT HERE]

Fourth, we analyze whether psychological ownership is an appropriate process variable to explain the main effect of empowerment on product demand (H2b) and on our alternative dependent variables. We test this hypothesis using analysis of covariance. If we run a model without any covariates, the treatment effect on WTP is significant ($p < .05$), as were the ANOVA findings reported above. However, if we add psychological ownership as a covariate to the model, the impact of the treatment becomes insignificant and the effect of psychological ownership on WTP is highly significant ($p < .01$), suggesting full mediation. A Sobel test further reveals significant mediation (z = 2.583; $p < .01$). Psychological ownership is thus an appropriate process variable for explaining the effect of empowerment on WTP. The results are robust if we replace WTP with purchase intentions (Sobel test for measure 1: z = 3.359; $p < .001$; for measure 2: z = 3.414; $p < .001$). The same pattern is also found for positive WOM (z = 3.454; $p < .001$) and the notions of "fun to wear" (z = 3.696; $p < .001$), willingness to take better care of the T-shirt (z = 3.281; $p < .01$), and verbal defense of the product (z = 3.191; $p < .01$).

STUDY 3

Objectives and Rationale

In Study 3, we address two issues of generalizability related to the proposed "empowerment – product demand" effect (H1). First, we aim to test this effect in a systematically different product category. Second, we aim to analyze whether it depends on (or is moderated by) the outcome of the product selection task.

In addressing the first aspect, we assume that the product category examined in Studies 1 and 2 (Threadless T-shirts) (1) is self-expressive or delivers social value (i.e., such products help communicate the consumer's social identity), (2) is highly hedonic in nature (i.e., purchased predominantly for pleasure and to satisfy experiential needs), and (3) is a category where emotions/feelings are highly relevant to purchase decisions. Can our findings be generalized to categories that score clearly lower on those dimensions? (For a more detailed discussion, see the "Pilot Study" section in the Web Appendix.) In order to address this question, we choose breakfast cereals as a suitable product category for Study 3, especially as the pilot study revealed that cereals score lower than T-shirts in all three dimensions. This product domain is also worth investigating because cereals are non-durables, meaning that any potential empowerment benefits are short-lived and might be sunk faster once the product is consumed. Finally, inspecting and evaluating new designs for T-shirts online might also be more involving compared to choosing ingredients for cereal mixes (where a perfect counterpart would be product tasting, which is not feasible online). In sum, studying such a systematically different product domain might constitute an interesting and potentially important complement to Studies 1 and 2.

Our second aim in Study 3 is to analyze whether the effects of empowerment on product demand depend on (or are moderated by) the outcome of the product selection task. In Studies 1 and 2, we opted for a realistic selection process (the highest-rated products at *time 1* were

selected for the collection presented at *time 2*). Thus, on average, participants in the treatment group ("you and the community decide") saw their choices make it to the shelves – in other words, the general evaluations of the final products are relatively high in *all* groups. In reality, however, at least a minority of consumers might experience the opposite – products they rated unfavorably might "win", or their evaluations of the final products might be relatively low (e.g., due to different preferences within the community).

In such situations, consumers will most likely develop less psychological ownership of the outcome because their feelings of responsibility and identification will be lower ("acts of claiming the nonowned as 'mine'" should be less intense; Pierce, Kostova, and Dirks, 2003, p. 87). This is in line with general psychology literature, which posits that if an outcome is produced jointly, individuals tend to claim less responsibility for a failure compared to a success ("my products made it"; Wolosin, Sherman, and Till, 1973). It thus seems plausible that the effects of empowerment on product demand might diminish for such consumers because the outcome of the joint decision-making process does not reflect their ideas and preferences (Korsgaard, Schweiger and Sapienza 1995). In other words, we expect that if the outcome of the product selection process does not match the participants' preferences, product demand might be not higher at all among empowered versus non-empowered customers. In order to explore this idea, we manipulate the outcome of the "empowerment to select" initiative, with one group exposed to the groups' highest-rated (top) products and one exposed to the groups' lowest-rated (flop) products.

Method

Design and procedure. In Study 3, we study breakfast cereals as a product category. We returned to the laboratory environment because we wished to measure product demand again using BDM auctions (WTP elicitation method) in order to maximize the generalizability of the main effect previously identified. In sum, 203 undergraduate students from four parallel classes at

a European university participated in our experiment (classes were again randomly assigned to groups). We devised a two-factor between-subject design. The two factors manipulated were participation ("you and the community decide" vs. "the community decides") and the outcome of product selection (highest-rated [top] vs. lowest-rated [flop] products).

Participants in Group 1 (n = 59) and Group 2 (n = 50) were exposed to the "empowerment to select" treatment. Group 3 (n = 51) and Group 4 (n = 43) were the equivalents of Group 2 in Study 1 ("the community decides"; participants were *not* empowered to participate in the selection process, and they were *not* exposed to the products at *time 1*). We chose this control group (as opposed to the other two control groups in Study 1) mainly because any potential interaction effects related to the outcome (top vs. flop products) should be highest in this control group (for example, if flop products are selected, disappointment effects should be more similar between the treatment groups and Group 4 from Study 1, i.e., "market research").

Otherwise, we employed the same procedures as in Study 1 with the following exceptions: First, participants were shown only one sample cereal mix (depicted on a color printout with verbal descriptions) which, as they were told, had recently been selected for production (before treatment). Second, at *time 1,* participants in the treatment groups (Groups 1 and 2) were asked to evaluate 16 prototype cereal mixes (taken from the company Mycereal) presented on color printouts (with detailed descriptions of the ingredients; each mix consisted of two types of grains and four additional ingredients, i.e., a combination of fruits and nuts).

Third, one week later (*time 2*), the three new cereal mixes were presented to participants. For Groups 1 and 3 (Groups 2 and 4), we chose the three mixes which received the highest (lowest) scores based on the ratings assigned by Groups 1 and 2 at *time 1* (an example of a top / flop mix is: chocolate cereal mix, corn flakes, macadamia nuts, green raisins, coconut rasps, strawberries / classic corn mix, soy flakes, peanuts, raisins, figs, raspberries). Finally,

participants were given the opportunity not only to bid on one of the three cereal mixes in the course of real BDM auctions, but also to participate in a behavioral lottery to win either one of the cereal mixes or an equivalent amount of money (as an alternative measure to capture product demand).

Measures. In the first questionnaire (*time 1*; before treatment) we used the same measures as in Study 1 to capture the control variables of product evaluations (related to the sample cereal mix; alpha = .88), company evaluations, and income. In the second questionnaire (*time 2*; after participants were exposed to the final selection of cereal mixes), we measured the participants' perceived impact (manipulation check). We employed the same items as in Study 1 (alpha = .80).

Following the product evaluation questions regarding the three new cereal mixes (alpha = .90; items as in Study 1), we again measured product demand by means of BDM auctions. Participants were then given the opportunity to participate in another drawing where they could win either their selected cereal mix (out of the three mixes presented to them at *time 2*) or an equivalent amount of money (= retail price of the cereal mix, including shipping costs). As participants were informed, the odds of winning either the selected cereal mix or the money would be exactly the same for both options. Thus, if our theory is correct, participants in the treatment groups ("you and the community decide") versus participants in the control groups ("the community decides") should choose the "win product" option more frequently than the "win money" option.

Findings and Discussion

Control variables. We employed a series of ANOVAs to analyze whether the groups differ with regard to our control variables (see Table W3 in the Web Appendix). First, we find that the groups did not exhibit significant differences in their product evaluations of the sample cereal mix, company evaluations, and income (all measured before treatment at *time 1*). This means that

any differences in the dependent variables can be attributed to our manipulation rather than differing sample characteristics.

Second, there are significant differences in the final product evaluations (cereal mixes evaluated at *time 2*; $p < .10$). We note, however, that post-hoc tests did not reveal significant differences between the two pairs of "you and the community decide" versus "the community decides" groups (Group 1 vs. 3; Group 2 vs. 4). As in Study 1, this finding indicates that the alternative explanations of potential product demand effects are very unlikely to be at play. As expected, however, there are significant differences between the top products (Group 1 and Group 3: M = 3.36) and flop products (Group 2 and Group 4: M = 2.99) with regard to product evaluations ($p < .05$). This confirms that at *time 2* the most preferred products from *time 1* (top) indeed received generally more favorable evaluations than the least preferred products from *time 1* (flop); however, we do note that they are not disliked completely.

Manipulation check. Next, an ANOVA reveals significant differences regarding perceived impact ($p < .001$; see Table 3). Taken together, participants in Groups 1 and 2 ("you and the community decide") report significantly higher levels of perceived impact (M = 3.62) than participants in Groups 3 and 4 ("the community decides") (M = 2.82; $p < .001$). The results are similar if we contrast both empowerment versus non-empowerment comparisons separately (post-hoc tests) – participants in Group 1 (M = 3.65) perceived their own impact more than participants in Group 3 (M = 2.95; $p < .001$), and participants in Group 2 (M = 3.58) perceived a greater impact than participants in Group 4 (M = 2.66; $p < .001$). This indicates that empowerment to select drives consumers' perceived impact independent of the outcome of the product selection process.

Key findings. We also find significant differences between the groups regarding WTP ($p < .05$) (unless otherwise indicated, all findings are based on ANOVAs, see Table 3). Overall, and

in support of H1, participants in Groups 1 and 2 ("you and the community decide") were willing to bid significantly more for their chosen cereal mix (M = 3.96) than participants in Groups 3 and 4 ("the community decides") (M = 3.44; $p < .05$). With regard to the outcome of the product selection process (top vs. flop), we also find a significant main effect. The participants in Groups 1 and 3 are willing to pay significantly more (M = 3.96) for the tops (highest-rated products at *time 1*) than those in Groups 2 and 4 (M = 3.43) for the flops (lowest-rated products at *time 1*) ($p < .05$). This underscores the validity of our method and findings.

However, the results are different if we contrast both empowerment versus non-empowerment comparisons separately. Similar to Study 1, post-hoc tests reveal that participants in Group 1 are willing to pay significantly more for their chosen cereal mix (M = 4.27) than those in Group 3 (M = 3.59; $p < .05$) (tops). The increase in WTP is again quite substantial (19 percent). Consistent with our predictions, however, the difference in WTP between Group 2 (M = 3.58) and Group 4 (M = 3.25) is not significant (flops). These findings suggest that the "empowerment – product demand" effect depends on the outcome of the product selection task.

Next, we analyze whether the "empowerment – product demand" effect is robust to its measurement. We exchange WTP with the second behavioral measure – the participants' decision whether they want to win their selected cereal mix or an equivalent amount of money. We explore this using cross-tab analysis (see Table 3). Among those who took the opportunity to take part in this raffle (n = 189), participants in Groups 1 and 2 ("you and the community decide") were observed more frequently than expected to opt for the "win the cereal mix" option (observed / expected frequency = 85 / 79.4) than the "win an equivalent amount of money" option (23 / 28.6). In contrast, participants in Groups 3 and 4 ("the community decides") were observed less frequently than expected to opt for the "win the cereal mix" option (observed / expected frequency = 54 / 59.6) as opposed to the "win an equivalent amount of money" option (27 / 21.4)

($p < .10$). A similar main effect can be observed for the top versus flop comparison: Participants in the "top" groups (Groups 1 and 3) wanted to win their chosen cereal mix more frequently than participants in the "flop" groups (Groups 2 and 4) ($p < .01$). If we analyze the top and flop samples separately, we find very similar patterns as those seen in WTP. Participants in Group 1 chose to win the cereal mix far more frequently (53 / 43.4 for the cereal mix and 6 / 15.6 for the money) than those in Group 3 (34 / 35.3 for the cereal mix and 14 / 12.7 for money; $p < .05$) (tops). In contrast, however, there is no significant difference between the observed and expected distributions for Groups 2 and 4 (flops).

[INSERT TABLE 3 ABOUT HERE]

STUDY 4

Objectives and Rationale

In Study 4, we primarily address another potentially important aspect of the generalizability of our proposed "empowerment – product demand" effect (H1). In this study, we conjecture that the effect might depend on perceived competence during the process of the product selection task – that is, the effects might diminish if consumers do not feel that they have the relevant competence to make sound decisions. Perceived competence refers to feelings of self-efficacy specific to the underlying task, or to the belief in one's own ability to perform the activity with skill (Bandura 1989). Our prediction again rests on the literature related to psychological ownership. As Pierce, Kostova, and Dirks (2003, p. 89) note, "the motivation for and the meaning of ownership are embedded in an effectance or competence motive." If individuals feel efficacious and competent, they tend to develop psychological ownership of the object being "influenced" (Pierce, Kostova, and Dirks 2003, Spreitzer 1995). To put it differently, psychological ownership will not be higher among empowered versus non-empowered customers

because the lack of perceived competence might hinder feelings of responsibility. It follows that if perceived competence is low, empowerment might not have an effect on product demand.

In order to explore this idea, we manipulate the process of the "empowerment to select" initiative, with groups being exposed to a selection task which induces either high or low levels of perceived competence. Instead of varying the underlying product category, we manipulate the complexity of a given product to keep alternative explanations to a minimum. As in Study 2, we opted for a more realistic study approach (online setting; consumer panel).

Method

Design and procedure. We again used cereals as the underlying product category, and participants (n = 280) were recruited from a European online consumer panel and randomly assigned to groups. We devised a two-factor between-subject design. The two factors manipulated were participation ("you and the community decide" vs. "the community decides") and the competence associated with the product selection task (high vs. low competence). Participants in Group 1 (n = 69) and Group 2 (n = 65) were exposed to the "empowerment to select" treatment. Group 3 (n = 74) and Group 4 (n = 72) was the equivalent of Group 2 in Study 1 ("the community decides"; participants were *not* empowered to participate in the selection process and *not* exposed to the products at *time 1*). We again chose this control group (as opposed to the other two control groups in Study 1) mainly because any potential interaction effects related to competence (high vs. low competence) should be highest compared to this group (e.g., if participants do not feel competent to perform the product selection task, the related effects should be more similar between the treatment group and Group 4 from Study 1, i.e., "market research").

Participants in Group 1 and 2 were asked to evaluate 12 prototype cereal mixes which all consisted of (1) a *constant* cereal basis (i.e., four types of grains; identical among all mixes) and

(2) a *variable* mix of four additional ingredients (i.e., a combination of fruits and nuts; different among mixes). The constant cereal basis was added to attain a basic level of comparability and similar product evaluations between groups. Perceived competence was manipulated by changing the variable mix. The participants in Group 1 were shown mixes consisting of generally known ingredients (e.g., strawberries, hazelnuts, etc.), thus we assume the participants' perceived competence to evaluate these alternatives to be generally high ("normal" cereal mixes). At *time 2*, participants in Groups 1 and 3 were shown the three mixes that received the highest scores (rating from Group 1 at *time 1*). Participants in Group 2 were instead asked to evaluate "exotic" cereal mixes, with the variable mix consisting of four ingredients (exotic fruits and nuts) that are assumed to be less known among participants (e.g., jackfruit, goji berries, etc.). Consequently, they should feel less competent in performing the related product selection task. At *time 2*, participants in Groups 2 and 4 were shown the three mixes that received the highest scores (rating of Group 2 at *time 1*). Otherwise, we employed the same procedures as in the previous studies.

Measures. In the first questionnaire (*time 1*; before treatment) we used the previous measures to capture the control variables of product evaluations (related to the sample cereal mix; alpha = .89), company evaluations, and income. After participating in the product selection task, participants in Groups 1 and 2 completed the following three items to measure perceived competence (adapted from Menon 2001; Spreitzer 1995; alpha = .79): "I feel competent enough to select the best cereal mixes", "I feel that I have the relevant knowledge and expertise to make sound evaluations," and "I had difficulties evaluating the cereal mixes properly" (reversed) (1 = strongly disagree and 5 = strongly agree).

In the second questionnaire (*time 2*; after participants were exposed to the final selection of cereal mixes), we employed the same measures as in the previous studies to capture the participants' perceived impact (alpha = .78) and product evaluations regarding the three new

cereal mixes (alpha = .74). As in Study 2, we decided to measure product demand in terms of hypothetical WTP and purchase intentions, as we could not employ WTP measurements using BDM auctions due to the panel's restrictions. Whereas we employed the same two measures of purchase intentions as in Study 2 (measure 1: two-item scale [alpha = .88]; measure 2: single item), we changed the WTP measure slightly. Most importantly, we altered it from absolute terms ("How much would you pay?") to relative terms ("Imagine you could buy a very similar cereal mix from *another* company. Would you be prepared to pay more or less compared to a cereal mix from this collection?"; 1 = >30% [more than 30% more]; 7 = <30% [more than 30% less]) (adapted from Chitturi, Raghunathan, and Mahajan 2007). We did so in order to capture the *incremental* value of or the demand for the underlying cereal mix compared to similar cereal mixes from other companies (incremental WTP).

Findings and Discussion

Control variables. We employed a series of ANOVAs to analyze whether the groups differ with regard to our control variables (see Table W4 in the Web Appendix). First, we again find that the groups did not exhibit significant differences with regard to their product evaluations of the sample cereal mix, company evaluations, and income (all measured before treatment at *time 1*). Second, there are no significant differences in the final product evaluations (i.e., the cereal mixes evaluated at *time 2*). As in the previous studies, this finding provides evidence that the alternative explanations for potential product-demand effects are very unlikely to be at play.

Manipulation check. Next, an ANOVA reveals that the manipulation of competence was effective, as participants in Group 1 (M = 4.44) felt significantly more competent in evaluating the "normal" cereal mixes than participants in Group 2 (M = 3.45; $p < .001$) felt when evaluating the "exotic" cereal mixes (*time 1*; see Table 4). Furthermore, we find significant differences in perceived impact ($p < .001$). Taken together, participants in Groups 1 and 2 ("you and the

community decide") report significantly higher levels of perceived impact (M = 3.69) than participants in Groups 3 and 4 ("the community decides"; M = 2.91; $p < .001$). The results are similar if we contrast both empowerment versus non-empowerment comparisons separately (post-hoc tests); participants in Group 1 (M = 3.76) perceived more impact than participants in Group 3 (M = 2.81; $p < .001$), and participants in Group 2 (M = 3.62) perceived more impact than participants in Group 4 (M = 3.01; $p < .001$). This indicates that empowerment to select drives perceived impact independently of perceived competence in the product selection process.

Key findings. We also find significant differences between groups regarding incremental WTP ($p < .05$; all findings are based on ANOVAs; see Table 4). Overall, participants in Groups 1 and 2 ("you and the community decide") indicated that they would be willing to pay significantly more for one of the final selected cereal mixes compared to similar cereal mixes from other companies (M = 4.57) than participants in Groups 3 and 4 ("the community decides") (M = 4.21; $p < .01$). We find similar results for both measures of purchase intentions (measure 1: M = 3.97 vs. M = 3.62; $p < .01$; measure 2: M = 6.99 vs. M = 6.28; $p < .05$). Taken together, these findings once again support H1.

However, the results are different if we contrast both empowerment versus non-empowerment comparisons separately. Whereas post-hoc tests reveal significantly higher means for incremental WTP in Group 1 (M = 4.65) than in Group 3 (M = 4.23; $p < .05$; "normal" cereal mixes), the corresponding difference between Groups 2 and 4 is not significant (M = 4.49 vs. M = 4.19; *n.s.*; "exotic" cereal mixes). The same patterns can be observed for the two measures of purchase intentions (measure 1: Group 1: M = 4.15 vs. Group 3: M = 3.66; $p < .01$; Group 2: M = 3.78 vs. Group 4: M = 3.59; *n.s.*; measure 2: Group 1: M = 7.43 vs. Group 3: M = 6.55; $p < .05$; Group 2: M = 6.48 vs. Group 4: M = 6.00; *n.s.*). Overall, this supports our prediction that the "empowerment – product demand" effect might depend on the perceived competence during the

product selection process (i.e., the effect diminishes if consumers do not feel that they have the relevant competence to make sound decisions).

[INSERT TABLE 4 ABOUT HERE]

GENERAL DISCUSSION

Summary and Managerial Implications

In this paper, we analyze the psychological consequences of "empowerment to select" strategies. In the course of four studies, we most importantly find that even though their product evaluations are *identical*, customers who are empowered to select the products to be marketed exhibit stronger demand for the underlying products than non-empowered customers (measured in various ways, including purchase intentions and WTP based on real auctions). This effect can be observed because customers assume more psychological ownership of the selected products. The managerial implications of our findings are straightforward: In exchange for giving up a certain degree of power to consumers, companies can not only reduce the risks associated with new products but also benefit from increased demand.

These findings also highlight the fact that such empowerment strategies might constitute a promising alternative to other Web-enabled initiatives such as mass customization. Research in that field has shown that customers are willing to pay substantially more, as "customized products create higher benefits for customers than standard products because they deliver a closer preference fit" (Franke, Keinz, and Steger 2009, p. 2). Interestingly, and in contrast to our findings, those scholars find that customization boosts individual demand (WTP) *and* product evaluations. This might be attributed to the fact that self-design (vs. empowerment to select) allows the highest level of preference fit as well as feelings of accomplishment from having *designed* a custom product *oneself* (Franke and Schreier 2008, Franke, Schreier, and Kaiser 2009).

In practice, however, this will depend heavily on the firm's ability to respond to customers' *individual* preferences, which means that the benefits of customization always come at the cost of producing single-unit quantities. If the extra benefit does not outweigh the extra cost (e.g., due to the complexity of production), empowerment to select might be preferable over mass customization.

Furthermore, we find that the "empowerment – product demand" effect depends on the outcome of the product selection task. In other words, the effects diminish if the outcome of the joint decision-making process does not reflect the consumers' preferences. In light of this finding, companies might benefit in particular from psychological product-demand effects if consumer preferences within a market or market segment are relatively homogeneous (i.e., most consumers will see "their" products win). In contrast, the fraction of consumers with increased product demand will be smaller if consumer preferences are highly fragmented (i.e., most consumers will see winning products which they do not prefer; in such situations, mass customization might be a preferable strategy). However, our findings also suggest that no negative product-demand effects can be expected in the latter case (empowered customers do not demand the products *less* than non-empowered customers), although a stronger test using a highly involving product category and truly "disliked" flop products would be necessary in order to make this conclusion with certainty.

We also find that the "empowerment – product demand" effect depends on perceived competence during the product selection task (i.e., the effects diminish if consumers do not feel that they have the relevant competence to make sound decisions). This finding also has clear implications. Companies might be most likely to benefit from psychological product-demand effects if their (potential) customers are competent enough to be empowered. In other words, empowerment will be most beneficial in product categories where broad parts of the consumer

population have a sound level of knowledge, where consumers can easily compare different product concepts, and, of course, where such tasks can be carried out online.

Beyond the specific benefits discussed, managers should also consider the potential drawbacks of empowerment. What, for example, if customers participating in such initiatives do not reflect the larger target market very closely? In such a situation, the products selected by empowered customers might not be the "right" products for the rest of the market. This problem might be especially severe for more complex and technical products, because few consumers will be interested in empowerment if they do not understand the products very well in the first place. This would imply that only a small fraction of highly knowledgeable, leading-edge consumers will participate. Compared to a very large and more representative set of participants, the likelihood of matching the preferences of the general market might be clearly lower. On the other hand, it does not constitute a flaw from the outset, as it might very well be that such lead users foreshadow general demand (Franke, von Hippel, and Schreier 2006; Urban and von Hippel 1988). In either case, the small number of participants in such a context would naturally also reduce the overall magnitude of the effects reported in this manuscript.

Another obvious drawback is that empowerment firms lose a certain degree of power in decision-making. This might have severe consequences if – from the company's perspective – customers "don't get it right." For example, a company's user community might develop a certain "aesthetic" (i.e., a strong sense of what they want) over time, thus leaving little room for more radical shifts and changes – like "a school of fish moving in a particular direction" (quote from an interview with one of the founders of Threadless, Walker 2007, p.1).

Limitations and Future Research

A number of limitations and promising areas for future research warrant discussion in this context. First, we note that our experiment was framed around an unknown brand, and therefore

we are confident that our findings will also hold for start-up companies in particular. Future research should analyze whether and how our findings can be extended to established brands. On a related note, it might be worthwhile to explore the extent to which the size of the community influences empowerment effects. Intuition suggests that the size might be negatively related to perceived impact, etc. (e.g., a person will perceive more impact if only she and a few others decide). However, the contrary might also be true, since consumers might feel and appreciate being part of a larger and more important movement.

Second, it might also be interesting to analyze how empowerment effects change over time. In this context, the degree to which the outcome meets the individual's preferences might be an interesting moderator. As noted, we did not find an interaction effect between empowerment and outcome (top vs. flop) on perceived impact, nor did we find a related *negative* effect on product demand in our setting. We still believe that such effects could arise, at least in the long run. As in the case of repeated negative experiences during political elections, customers might get frustrated and lose the perception of "really" having an impact on the final outcome if they are always "wrong" (Kanazawa 2000). Consequently, over time the product-demand effect might not only diminish but may even turn negative due to certain disappointment effects in the case of *repeated* weak matches between an individual's preferences and those of the community. Important variables to consider here might also include the degree to which consumers really remember their specific chosen product concepts from *time 1* to *time 2* (to determine whether their choices made it to the shelves or not) and the perceived variance in the original choice set (to see whether or not non-preferred concepts sufficiently resemble their preferred concepts).

Third, it would be interesting to explore whether empowerment also affects other marketing variables not tied to the underlying products. As a start in that direction, we found that empowerment also increased consumers' future loyalty intentions. This suggests that there might

be more general effects on the customer-company relationship. If that holds true, it might be useful to extend and contrast the related implications of empowering customers to select the products a company should market to other consumer-relevant decision-making processes, such as the selection of advertising campaigns or targets for corporate social responsibility activities.

Scholars pursuing this line of research will help to enhance our understanding of empowerment strategies and to inform managers more fully about the enduring and long-term consequences of shifting power to consumers.

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TABLE 1
Manipulation Check and Findings (Study 1)

	Group 1 (n = 76)	Group 2 (n = 60)	Group 3 (n = 73)	Group 4 (n = 55)
Task (*time 1*)	• "Select the best T-shirts" • ("you and the community decide")	• - • ("the community decides")	• "Have a look at the T-shirts" • ("the community decides")	• "Select the best T-shirts" • ("market research")
DVs (all at *time 2*)	M (SD)	M (SD)	M (SD)	M (SD)
Perceived impact[a]	3.54 (.86)	2.83 (.88)	2.89 (.86)	2.78 (.87)
WTP[b]	15.41 (12.72)	9.25 (10.14)	10.33 (12.50)	9.56 (9.18)

[a] ANOVA: F-value = 11.925 ($p < .001$); [b] ANOVA: F-value = 4.506 ($p < .01$)

TABLE 2
Manipulation Check and Findings (Study 2)

	Group 1 (n = 65)	Group 2 (n = 63)	Differences (ANOVA)
Task (*time 1*)	• "Select the best T-shirts" • ("you and the community decide")	• "Select the best T-shirts" • ("market research")	
DVs (all *time 2*)	M (SD)	M (SD)	F- (*p*-)value
Perceived impact	3.75 (.71)	3.10 (.98)	18.905 (.00)
Psychological ownership	2.86 (1.01)	2.20 (1.02)	13.528 (.00)
Hypothetical WTP	20.74 (8.93)	17.24 (.8.91)	4.828 (.03)
Purchase intention (measure 1)	3.55 (1.06)	3.16 (1.20)	3.873 (.05)
Purchase intention (measure 2)	5.71 (2.48)	4.65 (2.60)	5.414 (.02)
Positive WOM	3.65 (.94)	3.09 (1.09)	9.295 (.00)
Fun to wear	3.74 (1.09)	3.19 (1.16)	7.553 (.01)
Special care	3.31 (1.25)	2.75 (1.23)	6.562 (.01)
Verbal defense	3.12 (1.23)	2.22 (1.01)	20.458 (.00)
Loyalty intention	3.26 (.87)	2.75 (1.08)	8.619 (.00)

TABLE 3
Manipulation Check and Findings (Study 3)

	Group 1 (n = 59)	Group 2 (n = 50)	Group 3 (n = 51)	Group 4 (n = 43)
Task (*time 1*)	• "Select the best cereal mix" • ("you and the community decide")	• "Select the best cereal mix" • ("you and the community decide")	• - • ("the community decides")	• - • ("the community decides")
Treatment (*time 2*)	• "Top" products selected	• "Flop" products selected	• "Top" products selected	• "Flop" products selected
DVs (all at *time 2*)	M (SD)	M (SD)	M (SD)	M (SD)
Perceived impact[a]	3.65 (.86)	3.58 (.84)	2.95 (.84)	2.66 (.84)
WTP[b]	4.27 (1.86)	3.58 (1.92)	3.59 (1.69)	3.25 (1.45)

	Group 1 (n = 59)	Group 2 (n = 49)	Group 3 (n = 48)	Group 4 (n = 33)
Lottery choice[c]	Observed frequency (expected)	Observed frequency (expected)	Observed frequency (expected)	Observed frequency (expected)
Cereal mix	53 (43.4)	32 (36.0)	34 (35.3)	20 (24.3)
Money	6 (15.6)	17 (13.0)	14 (12.7)	13 (8.7)

[a] ANOVA: F-value = 16.033 ($p < .001$)
[b] ANOVA: F-value = 3.136 ($p < .05$)
[c] $\chi^2 = 12.773$ ($p < .01$) (all four groups); $\chi^2 = 3.447$ ($p < .10$) (Groups 1 and 2 vs. Groups 3 and 4); $\chi^2 = 7.640$ ($p < .01$) (Groups 1 and 3 vs. Groups 2 and 4); $\chi^2 = 6.285$ ($p < .05$) (Group 1 vs. Group 3); $\chi^2 = .188$ ($p = .67$) (Group 2 vs. Group 4)
Note: We did not identify significant interaction between empowerment ("you and the community decide" vs. "the community decides") and outcome (top vs. flop products) (perceived impact: F-value = .815; *n.s.*; WTP: F-value = .503; *n.s.*).

TABLE 4
Manipulation Check and Findings (Study 4)

	Group 1 (n = 69)	Group 2 (n = 65)	Group 3 (n = 74)	Group 4 (n = 72)
Task (*time 1*)	• "Select the best cereal mix" • ("you and the community decide")	• "Select the best cereal mix" • ("you and the community decide")	• - • ("the community decides")	• - • ("the community decides")
Cereal mixes	• "Normal"	• "Exotic"	• "Normal"	• "Exotic"
DVs (all *time 2*)	M (SD)	M (SD)	M (SD)	M (SD)
Perceived competence[a]	4.44 (.56)	3.45 (.85)	n.a.	n.a.
Perceived impact[b]	3.76 (.99)	3.62 (.84)	2.81 (1.12)	3.01 (1.09)
Incremental WTP[c]	4.65 (1.24)	4.49 (1.15)	4.23 (.90)	4.19 (.76)
Purchase intention (measure 1)[d]	4.15 (.96)	3.78 (1.01)	3.66 (1.06)	3.59 (1.16)
Purchase intention (measure 2) [e]	7.43 (2.18)	6.48 (2.24)	6.55 (2.38)	6.00 (2.53)

[a]ANOVA: F-value = 64.595 ($p < .001$); [b] ANOVA: F-value = 14.213 ($p < .001$); [c] ANOVA: F-value = 3.214 ($p < .05$); [d] ANOVA: F-value = 3.994 ($p < .01$); [e] ANOVA: F-value = 4.572 ($p < .01$)
Note: We did not identify significant interaction between empowerment ("you and the community decide" vs. "the community decides") and competence (normal vs. exotic cereal mixes) (perceived impact: F-value = 2.026; *n.s.*; incremental WTP: F-value = .259; *n.s.*; purchase intention measure 1: F-value = 1.515; *n.s.*; purchase intention measure 2: F-value = .520; *n.s.*).

WEB APPENDIX

PILOT STUDY

One objective of Study 3 is to test the proposed "empowerment – product demand" effect in a systematically different product category. First, we assume that the product category examined in Studies 1 and 2 (Threadless T-shirts) is self-expressive or delivers social value. This social value "reflects the utility derived from a product category's ability to enhance social self concept" (Sweeney and Soutar 2001, p. 211). It appears likely that T-shirts are used by consumers – and in particular by the populations studied – as a means of expressing themselves and communicating their social identity, thereby satisfying social needs such as the need for approval (e.g., Michaelidou and Dibb 2006). One might challenge whether the findings from Studies 1 and 2 related to product demand would also hold for products of potentially lower social relevance (as empowerment might be less important and its effects weaker in this context).

Second, we assume that T-shirts are highly hedonic in nature (cf. Michaelidou and Dibb 2006). This means that such products are purchased predominantly for pleasure and they satisfy experiential needs (e.g., it is fun and enjoyable to purchase, own and use such products). For our research context, scholars most importantly suggest that consumers are *less* price-sensitive and more eager to pay a premium for highly hedonic products (Wakefield and Inman 2003). In a vein similar to the arguments above, this leads to the question of whether the findings from Studies 1 and 2 can be generalized to product categories where consumers pay less attention to hedonic benefits. From this perspective, the specific benefit of empowerment is clearly more hedonic (i.e., having an impact and assuming psychological ownership of the outcome) than utilitarian (i.e., the product provides better functions and performance), and one might question whether the effects

on product demand (WTP) would hold for *less* hedonic products, also because consumers tend to be generally more price-sensitive in such categories.

Third, these two arguments might also lead to the general conclusion that T-shirts constitute a product category where emotions/feelings are highly relevant to purchase decisions (Michaelidou and Dibb 2006). What about product categories where emotions and feelings are generally less relevant? All of these considerations challenge the likelihood of replicating our findings in such domains. On the other hand, however, one could argue that empowerment and the related feelings (i.e., having an impact and assuming psychological ownership of the outcome) might even change the nature of the underlying products – that is, by making them more hedonic, increasing their social value, or making emotions more pronounced, etc. Overall, research has suggested that consumers' need and quest for more control and participation in the marketplace may be independent of the specific characteristics of the product category (Holt 2002). In turn, this would suggest that the effects on WTP could very well be generalized to such product categories. Studying such a systematically different product domain might therefore constitute an interesting and potentially important complement to Studies 1 and 2.

We chose to study breakfast cereals as a product category in Study 3 because it appears to be distinct from T-shirts in terms of the variables discussed. We tested our conjectures in a small pilot study (n = 28) using a within-subject design. In the pilot study, undergraduate students were exposed to pictures of a set of T-shirts (from Threadless) as well as a set of cereals (from the company Mycereal) and asked to complete a short questionnaire containing established scales to measure the degree to which the respective products render social value, are perceived to be hedonic (and utilitarian), and are perceived to be "emotional" (i.e., whether emotions are important to the purchase decision).