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Abstract

This paper examines how and why co-creation leads to satisfaction and purchase intention. An online study portrayed to look like a company asking for help in co-creation manipulated participants to engage in either an exchange or communal relationship, as well as varied the level of participant involvement. The results indicate that consumers who form an exchange relationship with the company and are compensated for co-creation reach significantly higher levels of satisfaction and purchase intention than consumers who are enticed to form a communal relationship and complete co-creation as a favor. These findings indicate that managers should compensate consumers in their co-creation initiatives, and refrain from trying to form communal-based relationships with participating consumers. The present study also finds that satisfaction mediates the effects of relationship framing on purchase intention completely, whereas higher involvement directly leads to higher purchase intention. Taken together, these findings shed light on the causal link between the underlying psychological processes and resulting value outcomes in co-creation. Theoretical and managerial implications are discussed to help companies maximize the value of their co-creation activities.

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1. Introduction

The marketing literature is increasingly focusing on customer participation in value creation, and more and more companies are engaging their customers in collaborative processes to create new offerings or improve existing ones (Mustak, Jaakkola, & Halinen, 2013). This increase in focus is substantiated by marketing research having identified several valuable outcomes of customer participation, both for the company and for the consumers. These include higher repurchase rates, lower price sensitivity, more favorable perception of the brand image, participation in service recovery, and higher customer satisfaction (Mustak et al., 2013; Cermak, File, & Prince, 1994; Hsieh & Chang, 2004; Woisetschläger, Hartleb, & Blut, 2008; Dong, Evans, & Zou, 2008; Hibbert, Piacentini, & Hogg, 2012; Vega-Vazquez, Revilla-Camacho, & Cossío-Silva, 2013).

Companies have several options to choose from when conducting co-creation. Companies, for example, utilize focus groups to assess the utility of various offering attributes, which in turn is used to conduct product development or make changes to service provisions. Similarly, hotels, restaurants, and travel agencies frequently invite visitors to write online reviews of their services, and phone service providers ask customers to evaluate the quality of their customer service. Customer participation in value creation, or co-creation, is also used for more extensive tasks, such as companies developing various types of software through alpha and beta tests (i.e., computer games). However, these different ways of co-creating also represent significant costs for companies. Hence, determining how to most effectively conduct co-creation should be a priority for managers. Additionally, several researchers explicitly state that there is a clear research gap in the field of service marketing in terms of *why* and *how* participation in co-creation leads to these different value outcomes and changes attitudes towards the offering or the company. (Fliess, Dyck, & Schmelter, 2014; Grönroos & Voima, 2013; Vega-Vazquez et al., 2013). Answering these questions would help managers fully capture the value of co-creation, while ensuring optimal intentional and behavioral outcomes for consumers as well.

Until recently, the customer participation literature has mostly taken the perspective of companies, and specifically how they can benefit by including customers in their processes. Most of the literature in the field is purely focused on the end-results of customer participation, such as economic gain (Vega-Vazquez et al., 2013), but the actual mechanisms through which customer

participation can benefit companies are yet to be understood. Vargo and Lusch (2004) argue that this kind of company-centric perspective does not work anymore, and that firms should instead shift their perspective to service-dominant logic (S-D logic). In other words, companies should no longer focus on the thing that is exchanged, such as goods and money, but on the actual process of exchange. According to S-D logic, the customer determines the value outcome of the interaction. Customer participation literature has insufficiently applied S-D logic, which might explain why researchers have not been able to provide explanations for how value outcomes are generated in co-creation. The present study applies S-D logic by taking the co-creation participants' perspective and tries to provide insight into how they view the process, which in turn helps close the aforementioned gaps.

The present study is unique as it bridges research from service marketing and branding with consumer psychology. Two well-known psychological mechanisms of how attitudes may change in interpersonal relations are included, namely the reciprocity heuristic and the Ben Franklin Effect (BFE) (Cialdini 2001; Aronson, Wilson, & Akert, 2010). The BFE is based on dissonance theory and states that we will like a person more after doing him or her a favor (Jecker & Landy, 1969). The reciprocity heuristic can also impact participating consumers' changes in attitudes towards a firm (Schindler, 1998), but this mechanism requires the firm to reward or compensate consumers. Since these mechanisms serve as ways through which attitudes may change, they can potentially explain why and how value outcomes, such as satisfaction and purchase intention, are created in co-creation situations.

Companies that utilize co-creation may generate economic value and reduce costs by assigning a part of the company's productive task to consumers (Mustak et al., 2013; Lovelock and Young, 1979; Mills, Chase, & Margulies, 1983). However, a crucial question when companies utilize co-creation, is whether or not to compensate the consumers for participating. Participating consumers may receive economic value through cost reductions, discounts, and rewards, which accumulates costs for the firm respectively (Bitner, Faranda, Hubbert, & Zeithaml, 1997; Prahalad & Ramaswamy, 2004). We suggest that reciprocity and the BFE serve as two different ways for optimizing co-creation value, both of which have different implications.

When companies utilize compensation in customer participation, the process emulates the dynamics of an exchange relationship. In such scenarios, the reciprocity heuristic will impact participating consumers' potential changes in attitudes towards the firm (Cialdini, 2001; Schindler, 1998). Conversely, when companies choose not to compensate participating consumers, and instead frame participating consumers' effort as a favor of which the firm is very grateful, then the co-creation scenario is more adherent to a communal relationship (Batson, 1993). If a company would be able to activate this latter psychological mechanism in its co-creation process, it might be able to achieve customer satisfaction or positive behavioral intentions without reciprocation, and thus reduce the costs of applying co-creation. However, such effects have yet to be explored in consumer-to-business settings, which is one of the focal points of interest in the present study.

Furthermore, according to Petty, Cacioppo, and Schumann, (1983), involvement has a significant moderating effect on ad effectiveness, as it affects whether people take a central or peripheral route in the process of changing their attitudes. This leads us to believe that involvement could also moderate the attitudinal outcomes of co-creation. Therefore, we consider it important to assess how the outcomes of co-creation vary depending on degree of involvement across scenarios. For example, the Lego Ideas platform allows for people to co-create with the brand, either through designing their own Lego sets, or by voting which set should go into production (Schlagwein, & Bjørn-Andersen, 2014). The level of involvement differentiates these two activities, not only in the invested effort in time, but also in the amount of personal significance for the outcome of the co-creation. Hence, the present study aims to explore how high- or low-involvement processes may moderate the effects of giving compensation in customer participation processes. At its core, the present study compares the effects of the BFE up against the reciprocity heuristic in a co-creation setting, while manipulating the level of involvement. The primary reason for this is to examine whether companies can cut costs in co-creation by using the BFE and attempt to demonstrate boundary conditions for the effects of compensating consumers. Thus, we attempt to help companies frame their co-creation requests in ways that maximize the desired outcomes.

The present study makes several important contributions to the customer participation literature. Firstly, by bridging co-creation with psychology, we add a

new perspective to the existing literature and explain some of the underlying mechanisms of how co-creation leads to valuable outcomes both for the consumer and the company. Secondly, previous research has not adequately demonstrated the importance of involvement in co-creation, a gap which the present study makes steps towards closing. Thirdly, a very limited amount of studies look at satisfaction as an outcome of co-creation, especially through experimental design, even though research suggests satisfaction and co-creation are connected (Navarro, Llinares, & Garzon, 2016). This is why satisfaction serves as one of our dependent variables. Fourthly, this paper is one of the first ones to test if the relationship type between consumers and companies during co-creation has an impact on satisfaction and purchase intention.

Finally, we also offer several managerial contributions and give concrete advice on how companies can utilize the findings when designing future co-creation initiatives. The study shows that the relationship type has a significant impact on satisfaction and purchase intention, and involvement in the co-creation process has a significant impact on purchase intention. This means that managers should ensure the instructions, co-creation tasks, and incentives are properly designed to maximize the desired value outcomes. We also demonstrate the importance of compensating people for their participation.

The paper is organized as follows. Section 2 gives an overview of the fields of customer participation, value outcomes, consumer psychology, and customer involvement. We also draw on the relevant literature to present nine hypotheses. Section 3 describes our method and data collection, and Section 4 presents the results of our study. Section 5 discusses the results in the light of our hypotheses as well as relevant literature. We also offer managerial implications for utilizing co-creation, present suggestions for further research, and acknowledge the limitations of our study. Finally, Section 6 presents our conclusions.

2. Literature Review

2.1 Customer Participation and Co-Creation Terminology

Mustak et al. (2013, p. 341) define customer participation as the “customer’s contribution of labor or resources to the creation of offerings”. It encompasses, for example, co-creation of brands, product customization, and new product and service innovation. There are several aspects to customer participation. Research has looked at different customer roles, such as being a partial employee (Johnston, 1989), quality evaluator (Ennew and Binks, 1999), and co-producer (Kelley, Donnelly, and Skinner, 1990), as well as different customer behaviors and resources they can offer to companies (Mustak et al., 2013). Our review of the existing literature shows that the actual mechanism of how customer participation can benefit companies is under-researched, as most of the research focuses solely on the end-result of the process from the company’s perspective (Vega-Vazquez et al., 2013).

A range of terms has been used to describe the different aspects and parts of the process of co-creation. Many of them intertwine in meaning, and researchers have used them interchangeably and sometimes inconsistently. For clarity, we have looked at existing literature to define some of the key concepts that we use later in this paper. According to Fliess et al. (2014), *customer participation* encompasses the activities and the degree of effort the customer contributes with during the service process. Customer participation research has extended to *customer co-creation*, a field of study that sees the customer as an equal actor in the process of value creation. The value is determined by the customer, in accordance with the S-D logic (Vargo, & Lusch, 2004). S-D logic means that value, an outcome of an interaction between a customer and a company, results from the application of embedded knowledge. The theory argues that firms can only make value propositions, but the final value depends on the perception of the consumer. Because of the increasing attention that co-creation is gaining in the marketing literature, more research should focus on the way in which consumers define the value outcome of their participation. The present study applies S-D logic by taking the consumers’ perspective in co-creation, and thus shifts the focus from being predominantly firm centric to being more customer centric.

Customer participation as a research field reaches over to other disciplines outside of marketing as well, as only half of published articles are found in marketing journals (Mustak et al., 2013). Our research is heavily influenced by psychology, as we apply research conducted on interpersonal relations to relationships between brands and consumers. We believe that two psychological mechanisms, namely the reciprocity heuristic and the BFE, play a key role in forming co-creation value outcomes. The reason for this is that they reflect two different ways in which companies recruit co-creation participants: with compensations, or by asking for a favor.

2.2 The Reciprocity Heuristic

Similar patterns of compensation in which people are either rewarded or not for their efforts can be seen in interpersonal relationships: you either expect something in return for your actions or complete a favor out of sheer will to help.

Cialdini (2009, p. 13) claims that people are conditioned by human society to “repay, in kind, what another has provided.” This effect, named as the rule of reciprocation, has been described as a rule that is subscribed to and followed in all human societies (Gouldner, 1960). An example of this rule was demonstrated in a study by Regan (1971), where a confederate purchased a soda for other participants and later requested them to purchase raffle tickets. The results show that people have a normative pressure to reciprocate favors done to them. This also applied when the confederate was not liked, meaning the human need to reciprocate also applies to unpleasant targets.

Moreover, it is particularly interesting that the rule of reciprocation, in certain processes, can lead to value outcomes for the seller. Very few previous studies have looked into attitude change as a consequence of reciprocity, probably because the most common outcome of the reciprocity heuristic is the act of reciprocation itself, which is easier to observe and measure than changes in attitudes. Schindler (1998) is one of the few who has explored how some aspects of reciprocity might lead to changes in attitudes. More specifically, he looked into noneconomic appeals of price promotions by examining whether components, other than the size of the discount, impact the positive feelings and behavioral intentions the promotion causes. An experiment was conducted in which the size of a price promotion was held constant, whereas the degree of participants’ perceived responsibility was manipulated through a set of written scenarios that

described a person receiving a discount with varying levels of responsibility for the discount, such as actively shopping around. Results showed that participants who received discounts due to internal-to-themselves reasons reported higher satisfaction with the discount, higher word-of-mouth intent, and higher repurchase intent. However, degree of involvement, relationship type, and whether the participants received a price-promotion or not were not manipulated, the effects of which will play a key role in the present study.

2.3 The Ben Franklin Effect as a Special Case of Dissonance Reduction

Another common way for companies to recruit consumers to take part in co-creation, is by asking them to complete the tasks as a favor. Not receiving any compensation for one's effort can consequently lead to a different type of attitude change than with reciprocity.

Changes in attitudes and what facilitates these changes is of great interest to many psychologists and marketers alike. People have strong attitudes in relation to themselves and generally need to see themselves as positive beings that are reasonable, moral, and smart (Aronson, Wilson, & Akert, 2010). Information that contradicts this, hinting that one has behaved in a manner that is irrational, immoral, or even stupid, causes one to experience discomfort. This feeling of discomfort, which is caused by doing something that is contrary to one's normal conception of self, is known as cognitive dissonance (Festinger, 1957). There are four ways with which people can reduce cognitive dissonance, with two of these requiring a change in attitude; (1) change the behavior to accommodate the dissonant cognition, (2) attempt to justify the behavior by changing a dissonant cognition, (3) add a new cognition that justifies the behavior, or (4) deny the relatedness between the contradictory cognitions. Examples of how these effects can manifest themselves in real life can be found with Gibbons, Eggleston, and Benthin (1997), who conducted a study of smokers and their attitudes towards the dangers of smoking. The smokers had changed their behavior and quit smoking through participating in a quit-smoking clinic, but relapsed into heavy smoking again after some time. After starting smoking again, the researchers found that the smokers could be quite creative in justifying their smoking. Some denied relatedness by convincing themselves that the science claiming correlations between smoking and cancer was inconclusive. Others changed their attitudes toward the dangers of smoking by adding new cognitions, for instance believing

that the cigarette filters were protecting them by trapping damaging chemicals, thus reducing the perceived chance of cancer.

When attempting to lower cognitive dissonance, one can also end up changing one's attitudes towards another person, especially after behaving either kindly or cruelly towards that person (Aronson et al., 2010). According to dissonance theory, if we complete a favor to another person, we will also end up liking them better due to justifying our own behavior to ourselves. This phenomenon was named the Ben Franklin Effect (BFE) after the famous politician Benjamin Franklin (1868/1900). Jecker and Landy (1969) conducted a study in which they examined change in attitude as a result of doing someone a favor. An experimenter who was perceived slightly negative was administering intellectually demanding sequences of tasks that enabled participating students to win money. After completing the tasks, two thirds of the participants were presented with a request.. One third was asked to do the experimenter a favor by returning the money they had won to the experimenter. The second third of participants were asked to return the money to the department secretary, doing the Department of Psychology a favor. No favor was asked of the remaining one third of the participants, and they were allowed to keep the money they had won. The results showed that the experimenter was perceived slightly negatively by this group of participants who were not asked to give back their winnings, giving him a below average liking score. The group of participants who were informed that they were doing the experimenter a favor by returning the money to him rated him slightly above average liking, and the final group who gave money back as a favor to the psychology department rated the experimenter the lowest of the three groups. These results support the hypothesis that a person who does a favor to someone that he/she views either neutrally or negatively, will start to like that person more than if he/she did not do that person a favor. If the target is regarded positively, then doing a favor is likely to be in accordance with the attitudes one already has. Hence, the experienced dissonance for doing a favor is likely to be lower, and the extent to which one engages in dissonance reduction through attitude change might consequently be diminished.

We consider these findings as highly relevant for companies venturing into co-creation, since requests made of participating consumers can be framed as a favor with a lower compensation than what is conducive to the effort exhibited. Hence, the participating customers in such circumstances are likely to experience

cognitive dissonance, and consequent dissonance reduction in which attitudes are changed to be more in line with the fact that they have done the company a favor. Additionally, the present study compares the effects of the BFE up against the reciprocity heuristic in a co-creation setting. The primary reason for this is to examine whether companies can cut costs in their co-creation initiatives by utilizing the BFE.

2.4 Value Outcomes of Co-creation

Fang (2008) distinguishes between two dimensions of customer participation that can have an impact on the value outcomes of co-creation: customer participation as an information resource, and customer participation as a co-developer. Participating as an information resource occurs when the customer shares knowledge with the company, whereas co-developing occurs when the customer is significantly integrated into the development process through specific tasks. The present study is mainly interested in the customer's role as an information resource, because it is one of the most common and simple ways for many companies to co-create with their customers (Kristensson, Matthing, & Johansson, 2008). Utilizing customers as an information resource, rather than a co-developer, is cheaper and easier for a range of companies to execute. There are many existing tools with which to co-create in this way, such as SurveyMonkey, Google Forms, and Typeform, which is why the managerial implications of the present study are beneficial for any company, regardless of their size and budget. The results of the present study cannot confidently be extended to also cover customer's role as a co-developer, because the nature of such co-creation differs both in terms of involvement level (co-developers are more involved) and the compensation type (compensations are larger but only given to a selected few).

The many papers that determine certain value outcomes of co-creation predominantly outline the positive impact that customer participation has on efficiency, economic value, relationship value, and innovation value from the seller's perspective (Lovelock & Young, 1979; Rosenbaum, Ostrom, & Kuntze, 2005; Kaufmann, Lehner, & Tödtling, 2003). Taking a consumer perspective, Schindler (1998) shows that attributing responsibility to oneself for obtaining a discount leads to positive affect, which means that co-creation settings where the consumer is rewarded can have positive intentional and behavioral outcomes.

Even though the positive impact of co-creation for companies has vast support across research in different industries, these positive effects do have some boundary conditions. Facilitating customer participation can be demanding for employees, which leads to higher job stress (Hsieh, & Yen, 2005), and sometimes to competition with customers (Fodness, Pitegoff, & Sautter, 1993). Fang, Palmatier, and Evans, (2008) find that the share of the created value and contribution in new product development needs to be deemed as “fair” by both parties in order for the co-creation outcome to be valuable. Additionally, often giving rewards and discounts for participation can accumulate into a significant cost for the company. Only having extrinsic motivation to participate can even diminish creative problem-solving skills (Amabile, 1996), which leads us to think that rewarding customers for co-creation might not always yield the highest possible result.

Despite the growing interest towards S-D logic (Vargo, & Lusch, 2004), the service co-creation literature has not fully caught up with the idea that the value outcomes are, in fact, determined by the customer. Some articles have taken the consumer’s perspective to highlight benefits such as better fit of the offering, skill enhancement, and economic value, but there are still significant gaps in understanding the consumer’s mental process in co-creation (Bateson, 1985; Bitner et al., 1997; Grönroos, 2008). To aid in closing these gaps, the present study is especially interested to see what kind of psychological mechanisms contribute to co-creation value outcomes.

We utilized the value outcome list by Mustak et al. (2013) to select appropriate dependent variables for the present study. Table 1 presents a list of dependent variables that were considered, specifically because they would be convenient to measure in an online study, contrary to, for example, networking capabilities (Cova & Salle, 2008) or degree of personalization (Prahalad & Ramaswamy, 2004).

Table 1: Options for dependent variables for the present study

<u>Value Outcome</u>	<u>Exemplary Study</u>
Lower price sensitivity	Hsieh & Chang, (2004)
Satisfaction	Bloemer and Ruyter, (1999)
Loyalty and trust	Rosenbaum et al., (2005)
Positive word of mouth	File, Judd, & Prince, (1992)
Greater repurchase and referrals	Cermak, File, & Prince, (1994)

We selected satisfaction and purchase intention as the dependent variables for the present study. We wanted to limit the number of dependent variables to two to keep the survey length manageable for the respondents. Additionally, the following sections outline why we believe that specifically measuring satisfaction and purchase intention in the present study will provide valuable managerial insights into co-creation.

2.5 Satisfaction and Co-Creation

Satisfaction has gained less attention in customer participation literature, even though it has been suggested to stem from co-creation (Navarro et al., 2016). Customer satisfaction is increasingly recognized as a source of competitive advantage, leading to value outcomes, such as positive post-purchase behavior, retention, word-of-mouth, loyalty, and repurchase intentions (Tam, 2004; Ranaweera, & Prabhu, 2003; Bloemer, & Lemmink, 1992; Anderson, & Sullivan, 1993). Research shows that satisfaction leads to profitability directly, as well as through the abovementioned outcomes (Anderson, Fornell, & Lehmann, 1994). Eisingerich, Auh, and Merlo, (2014) go even so far as to argue that for satisfaction to increase profits, the company needs to utilize customer participation. Satisfaction has also been shown to have a clear causal link to other proven consequences of co-creation, such as greater repurchase likelihood, lower price sensitivity, loyalty, and positive word-of-mouth (Cermak et al., 1994; Hsieh & Chang, 2004; Rosenbaum et al., 2005; File et al., 1992). Nevertheless, despite the significant impact satisfaction can have on the success of companies, only a few studies have investigated its role as the consequence of co-creation. Hence, due to satisfaction being linked to, and a determinant for, several other value outcomes, we see it as a broad potential consequence of co-creation and thus a suitable dependent variable for the present study. By investigating satisfaction as a

consequence of co-creation, managers can confidently expect also other related value outcomes.

Many of the existing studies on the relationship between customer participation and satisfaction are single-method field studies in very specific settings and without the use of experimental manipulation. Their external validity is limited, as many of the studies lack sufficient sampling for generalization and are, for example, only conducted on MBA students (Yen, 2005), or customers at a single supermarket (Marzocchi, & Zammit, 2006). Hunt, Geiger, Oneto, and Varca, (2012) show in their field study that co-production between consumers leads to satisfaction, and that commitment and behavioral involvement serve as mediators of the effect. However, the study focuses specifically on co-production in community-supported agriculture programs, and thus cannot be generalized to also apply in co-creation in other industries. Similarly, research conducted by Vega-Vazquez et al. (2013) focuses on the value creation process from a customer perspective and confirms that co-creation indeed can lead to higher satisfaction. The study was conducted by analyzing interviews instead of an experimental design, in addition to which the results still leave a lot of questions unanswered about the underlying reasons for such a relationship. Finally, while many existing studies do find a causal relationship between participation and satisfaction, they offer limited knowledge to the research field in general, as well as narrow managerial implications. This is addressed by the present study which aims to provide results that yield high generalizability, and offer managerial implications which may be directly applied by marketing managers in their co-creation efforts across several industries.

2.6 Purchase Intention and Co-Creation

Existing research indicates that there is a causal relationship between co-creation and future purchase intentions. Cermak et al. (1994) find that the impact of co-creation on repurchase intention varies between different service types, specifically between nonprofits and legal/financial services, where legal/financial services saw a decrease in intentions after participation in co-creation. See-To and Ho (2014) theorize that co-creation leads to purchase intention because the consumer learns more about the offering in the process and thus becomes increasingly engaged to purchase, but the authors do not test this assumption. Brodie, Ilic, Juric, and Hollebeek (2013) find in their exploratory study that value

co-creation among brand community members leads to loyalty, satisfaction, empowerment, connection, emotional bonding, trust, and commitment, all of which share similar characteristics with behavioral intentions. Within service recovery research, Roggeveen, Tsiros, and Grewal (2012) show that allowing customers to co-create in finding a service recovery strategy leads to higher satisfaction and repurchase intention. Because of the clear relationship between co-creation and purchase intention, purchase intention will serve as a suitable second dependent variable in the present study. The present study is also one of the first to test if the relationship type between the consumer and the company has an impact on purchase intention.

2.7 Anthropomorphism

Dissonance theory, the reciprocity heuristic, the BFE, and relationship theory have been widely studied within psychology and marketing in the context of interpersonal interactions. However, the effects have not been thoroughly examined in business-to-consumer interactions, and we therefore suspect that interactions between consumers and companies are likely to evoke the same responses and effects. Research conducted within branding shows that strong brands tend to become anthropomorphized, which is the tendency for humans to assign humanlike characteristics to nonhuman agents, making them more likeable and approachable for humanlike interaction (Epley, Waytz, & Cacioppo, 2007). A typical way to make products more appealing through anthropomorphism is the use of humanlike mascots, such as the M&M character, but can go as far as to designing products to have facial features, such as big car headlights to mimic human eyes (Landwehr, McGill, & Herrmann, 2011).

Furthermore, brands are widely present in our lives through marketing communication, social media, consumption, and human representatives, such as influencers. Technology gives us an avenue for two-way interaction with brands, expanding the meaning of anthropomorphism from visual aspects to also textual ones. Kniazeva and Belk (2010) find that brand storytelling can act as a necessary building block for crafting brand personalities and anthropomorphizing the brand. Guido and Peluso (2015) argue that there are two ways to brand anthropomorphism, one of which has to do with the external attributes, and the other with perceived similar internal qualities, such as humanlike motivations and emotions. Thus, brand anthropomorphism applies to a wider range of companies

than to just those who have mascots or physical products, and can potentially be activated whenever a brand communicates in a way that reflects humanlike emotions that consumers also apply to themselves.

According to Aggarwal and McGill (2011), anthropomorphized brands can activate people's in-built goals for a successful social interaction, and thus elicit similar psychological responses as when dealing with other humans. Hence, if adequate anthropomorphism is present, when framing interactions as either communal- (BFE) or exchange (reciprocal) -based, then the same effects are likely to take place in business-to-consumer relations as in interpersonal interactions. This serves as our basis to hypothesize that the psychological mechanisms that are examined in the present study also work between consumers and companies. The present study therefore utilizes anthropomorphism to activate consumers' goals for successful social interaction.

2.8 Communal and Exchange Relationships

Relationships can be framed and consequently interpreted in different ways by agents exchanging favors, goods, or services. Batson (1993) distinguishes between two types of interpersonal relationships, namely exchange and communal relationships. Members of an exchange relationship benefit each other through fulfilling obligations back and forth through a continuum, whereas in communal relationships the underlying concern is the recipient's well-being. Exchange relationships are common, for example, between an employee and an employer, where work tasks are completed in exchange for monetary compensation. Communal relationships are most commonly seen between family members, where favors are completed out of the sheer will to help and regardless of compensation.

Williamson, Clark, Pegalis, and Behan (1996) further explored the effects of the BFE and identified that the type of the relationship influenced the consequent attitude change towards the target. The researchers conducted two studies investigating if the refusal to help an acquaintance negatively affects one's feelings for that person. The results show that denying someone help results in lowered positive feelings for that person in communal relationships, but not in exchange relationships. They also found that the same principles apply when one remembers denying help to another person one was in a communal relationship with. Our interpretation of these findings is that the BFE impacts satisfaction in

relationships which are framed as communal, whereas if they are framed as reciprocal, the BFE does not have such an impact.

Blanchard, Carlson, and Hyodo (2016) show that requesting a favor and at the same time offering a price promotion leads to higher likelihood of consumers accepting the proposed offer. The phenomenon was named *the favor request effect* by the researchers. However, the effect shares many common features with the rule of reciprocation. More specifically, the researchers state that the favor request effect is derived from the consumers perceiving the relationship as reciprocal. Reciprocal co-creation tasks closely resemble the underlying “if you scratch my back I scratch yours” framing of exchange relationships. Hence, examining the effects of framing relationships as either communal- (BFE) or exchange (reciprocal) -based in the context of co-creation warrants further examination.

Both the reciprocity heuristic and the BFE have been shown to be antecedents for favorable attitude changes. We therefore hypothesize that these two conditions are likely to lead to higher satisfaction and purchase intention than the control condition in which there is no relationship framing. However, it is also of interest to examine these two types of relationship framing up against each other to gain insights into which one yields the highest satisfaction and purchase intent. Hence, we have formulated four hypotheses below:

H_{1A} : Framing the co-creation as communal- (BFE) or exchange (reciprocal) -based will lead to higher satisfaction than a control condition in which there is no relationship framing.

H_{1B} : Framing the co-creation as communal- (BFE) or exchange (reciprocal) -based will lead to higher purchase intention than a control condition in which there is no relationship framing.

The following hypotheses state that framing the co-creation as communal- (the BFE) or exchange (reciprocal) -based will lead to significant differences in the levels of measured value outcomes. Prior research gives no indication of the direction and magnitude of these two mechanisms compared to each other, which is why we will leave the results to show potential differences between the two mechanisms.

H_{1c} : Framing the co-creation as communal- (the BFE) or exchange (reciprocal) -based leads to significant differences in satisfaction.

H_{1D} : Framing the co-creation as communal- (the BFE) or exchange (reciprocal) -based leads to significant differences in purchase intention.

2.9 The Role of Involvement in Co-Creation

Large part of our social cognition, the way we think of ourselves and stimuli around us, is based on unconscious thinking and the automatic reactions that follow (Aronson et al., 2010). Research suggests that a consumer's attention and comprehension towards a task are influenced by the consumer's ability and motivation to process information (Celsi & Olson, 1988). Our abilities and motivations arise from our past experiences which have a substantial impact on social cognition, but can also be affected by situational cues that determine what level of involvement a consumer experiences during the co-creation process.

While co-creation always requires some level of involvement from the consumers, their commitment and attention to the task can range from simple single tasks to demanding and time-consuming assignments. Barki and Hartwick, (1994) define involvement as a psychological state that reflects the relevance of an object or event. Especially personal relevance, such as whether a product is available in one's geographic area, impacts involvement. As such, involvement is a determinant for the level of elaboration consumers use to complete tasks.

Elaboration likelihood of information refers to the probability of the consumer having message- or issue-relevant thoughts, and attaching something of their own to the task (Petty et al., 1983). This is also described by the elaboration likelihood model (ELM). ELM constitutes that there are two distinctive routes to attitude formation and change, namely the central and peripheral routes. Stanovich and West (2000) have presented a similar theory, in which System 1 thinking refers to intuitive and fast thinking processes, and System 2 thinking to more effortful reasoning. Which route a person ends up using is sometimes up to individual consumer characteristics, such as general cognitive ability, but can also be largely impacted by the situation and context the consumer is in. Petty et al. (1983) show that situations can relatively easily be framed to encourage the use of either the central or peripheral route and thus affect the attitude endurance. Using certain cues to activate different levels of involvement is one way to impact

processing styles in consumer-company interactions, for example during co-creation. Even though the central route has been shown to lead to more enduring attitudes and behaviors, we argue that also activating the peripheral route can be beneficial in certain co-creation situations. Specifically, according to Petty and Cacioppo (1986), if people are unmotivated or unable to process information, their attitude can still be changed if peripheral cues are present in the situation.

During high-involvement tasks, consumers take the central route, where attitudes are changed through the consumer's careful consideration of information. Willingness to assign more cognitive effort towards a task can arise from personal relevance, for example the outcome of consumer feedback affecting the offering in their local store. Then again, low-involvement tasks are processed through the peripheral route, where the consumer uses heuristic cues to change attitudes. Peripheral cues are any type of persuasion heuristics that offer mental shortcuts to attitude change, such as pleasant pictures, attractive endorsers, expertise, rewards, social proof, to mention a few. People simply accept or reject these cues without much cognitive effort, and thus arrive at an attitude change without deliberate consideration. For example, Petty et al. (1983) show that having celebrity endorsers in an ad for a product had a greater impact on attitude when the consumer was in a low-involvement condition. Seeing a celebrity endorse a product offers consumers a mental shortcut to like the product without elaborating on the provided product information. Additionally, research shows that the reciprocity heuristic works as a positive cue in situations where people can assign responsibility for obtaining a discount to themselves, such as spending time looking for information (Schindler, 1998). These examples lead us to believe that persuasion heuristics can be assumed to work in a similar manner as mental shortcuts during co-creation, where the consumers see themselves as contributors to the task.

Research examining the effects of involvement and elaboration in customer participation settings is scarce. Hunt et al. (2012) show that behavioral involvement can act as a mediator between co-production and satisfaction in the context of community-supported agriculture, and suggest that co-production leads to satisfaction because of dissonance reduction. The results of the study are not easily generalizable, but indicate that involvement does play a key role in customer participation outcomes. Nevertheless, Petty et al. (1983) argue that involvement moderates the relationship between the message and its effect

towards attitude formation and behavioral intentions. Role of involvement as a moderator, rather than a mediator, receives greater support within marketing research (Chang, & Chuang, 2011; Baker, Cronin Jr, & Hopkins, 2009). Consequently, we argue that, in accordance with Petty et al. (1983), involvement moderates the relationship between co-creation and satisfaction.

Furthermore, we believe that involvement is likely to have a main effect on purchase intention. In the study conducted by Petty et al. (1983), involvement was manipulated through two conditions of either high or low temporal- and geographic -proximity. High temporal and geographic proximity makes it more likely that the product or service is in the consumer's consideration set (Shocker, Ben-Akiva, Boccara, & Nedungadi, 1991). Additionally, when information is processed through the central route, more cognitive resources are allocated to the task. Vohs and Faber (2007) found that spending more cognitive resources leads to higher urges to buy, willingness to spend, and more actual spending. Hence, we hypothesize that a high-involvement co-creation setting will lead to higher purchase intention than a low-involvement setting.

H₂: A high-involvement co-creation setting will on average lead to higher purchase intention for the company than a low-involvement setting.

2.10 Interaction Effects Between Framing of Relationship and Involvement

The present study examines the moderating properties of involvement in co-creation processes. It is based on the notion that priming the consumers with a co-creation task that includes either reciprocity or the BFE should also lead to different outcomes when paired with different involvement levels. As one of Cialdini's (2001) persuasion heuristics, reciprocity offers a mental shortcut for information processing and consequent attitudes. Petty et al. (1983) show that heuristic peripheral cues work best in a low-involvement setting, which is why we believe reciprocity works best when consumers use their System 1 thinking processes, which encourages intuitive, fast, and automatic responses (Kahneman, 2003). We therefore hypothesize that in low-involvement co-creation settings, participants will report higher satisfaction and purchase intention towards the company due to heuristic cues of reciprocity. In a low-involvement setting, people will be less likely to do a cost-benefit analysis of their participation, and thus have

lower likelihood of experiencing cognitive dissonance and thus dissonance reduction, which are the two prerequisites for the BFE to take place. Instead, they are likely to feel unsatisfied because the basic heuristic of reciprocity is not met in the interaction. Hence, participants in the BFE will not exhibit higher satisfaction nor purchase intention respectively.

H_{3A}: In a low-involvement setting, framing the co-creation as exchange based, through use of reciprocity, will lead to higher satisfaction for the company than framing the co-creation as communal through use of the BFE.

H_{3B}: In a low-involvement setting, framing the co-creation as exchange based, through use of reciprocity, will lead to higher purchase intention for the company than framing the co-creation as communal through use of the BFE.

Jecker and Landy (1969) suggest that the BFE works best for attitude formation when the requested task is effortful enough to activate cognitive dissonance. More specifically, when priming with the BFE in a high-involvement co-creation setting, we believe that consumers are likely to elaborate on the fact that they have exhibited significant effort in helping the company. This is why the BFE should work best, when the participants are encouraged to use System 2 thinking processes, which are effortful, slow, and controlled (Kahneman, 2003). Hence, participants are more likely to do a cost-benefit analysis of their actions, but if they, despite of that, agree to participate in co-creation, they are likely to experience cognitive dissonance. This is also due to lacking justification heuristics, such as compensation. Consumers will then engage in dissonance reduction, in which they are due to change their attitudes towards the company to be more in line with the fact that they have done the company a favor without anything in exchange.

Conversely, when priming with reciprocity in a high-involvement co-creation setting, the effort exhibited by consumers is not framed by the firm as favor for which it has high gratitude. The customer participation is rewarded through monetary gains, and thus reciprocity will serve as justification for the consumers' effort. We therefore believe that if the compensation is fair, the

reported satisfaction will be conducive to the control conditions, whereas if the compensation is regarded as too low or unfair, the participants are likely to report lower satisfaction. Hence, we hypothesize that in high-involvement co-creation settings, the BFE condition will lead to higher satisfaction and purchase intention for the company than the reciprocity condition.

H_{4A} : In a high-involvement setting, framing the co-creation as a communal relationship, through use of the BFE, will lead to higher satisfaction for the company than framing the co-creation as an exchange relationship through use of reciprocity.

H_{4B} : In a high-involvement setting, framing the co-creation as a communal relationship, through use of the BFE, will lead to higher purchase intention for the company than framing the co-creation as an exchange relationship through use of reciprocity.

The hypothesized causal relationships are depicted in Figure 1.

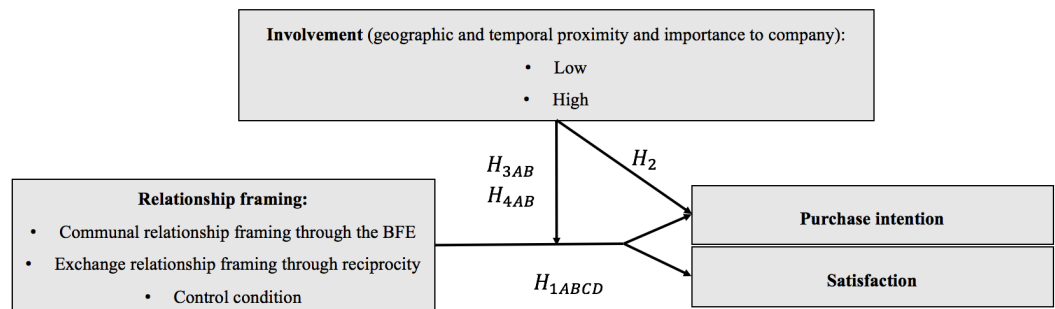


Figure 1: Conceptual framework of the present study.

3. Method

The present study conducted a controlled experiment and employed a 3 (exchange framing [reciprocity], communal framing [BFE], and control) x 2 (high- and low-involvement) between-subjects factorial design. In sum, we had four experimental groups and two control groups.

3.1 Pilot Study and Design of Questionnaire

When finalizing the questionnaire, we ran a pilot study to ensure that the wording and design of the scales were clear and had high quality. To conduct the pilot study, we convenience sampled 19 participants. Based on the feedback, we adjusted some wordings in the questions and scales so they could not be interpreted in multiple ways.

3.2 Recruitment of Participants

180 participants were recruited through Amazon Mechanical Turk (mTurk), and randomly assigned to one of the six treatment groups. All participants were rewarded \$0.60 for participation, in addition to which the two reciprocity treatment groups were given an additional bonus of \$0.40. The respondents were restricted to come only from The United States to make the company manipulation more believable, which should not significantly limit the generalizability of potential findings. The survey template can be found in Appendix 1.

3.3 Company Information

At the start of the study, all participants were presented with the same information about a fictitious coffee shop chain and a subsequent co-creation request. The reason for choosing a fictitious company rather than an existing one was to avoid potential confounding effects of pre-existing brand knowledge. We selected coffee shop as our industry type, since most consumers have some level of familiarity with purchasing from service providers in this category. The name, logo, and introduction text were crafted in a way that would make the brand seem credible, create the assumption that this coffee shop chain exists, and that the company needs help with improving their services.

The coffee shop chain's brand was anthropomorphized subtly through brand storytelling, personal pronouns, expressive emotions, and a logo. Such methods of anthropomorphism are frequently used by companies and can easily

be applied by companies that have not yet anthropomorphized their brand. The purpose of applying these methods in the present study was to activate people's need for a successful social interaction and increase the generalizability of the study through higher perceived credibility among participants.



Hi there!

We are South Shore Coffee, a chain of coffee shops looking to serve smiles and the best cup of coffee to our customers. We were founded in 2014, and have ever since taken pride in grinding our own coffee beans, and serving delicious hot beverages to coffee lovers. In the past four years, we have grown from one shop and two employees to eight shops and 25 employees.

In our shops, you can find a wide range of beverages from espressos to lattes and freshly squeezed juices, as well as homemade pastries and sandwiches. We are constantly looking to improve our services and offer our customers the best experience possible. We are super excited about what the future holds for us!

3.4 Initial Relationship Framing

After reading the introductory text, participants were randomly assigned to one of the 3 relationship framing (communal [BFE], exchange [reciprocity], or control) between-subject conditions.

Participants in the communal framing (BFE) condition were presented with text that informed participants that the company was highly appreciative for the favor they were doing the company by participating in the survey. The participants were also informed that their participation would help the company improve its products and services, for which the company was very grateful. Participants in this condition were then instructed to answer a series of questions about coffee and coffee shops.

Participants in the exchange framing (reciprocity) condition were presented with text that informed participants that they would be compensated with an additional 0.40 dollars, which would be payed after they had completed

the survey. Participants in this condition were then instructed to answer a series of questions about coffee and coffee shops.

Participants in the control condition were not presented with any framing, but they were presented with a text that instructed them to answer a series of questions about coffee and coffee shops.

3.5 Involvement Manipulation

Following the initial relationship framing, participants in the different framing condition were randomly assigned to one of the 2 (high or low) involvement between-subject conditions. The high- and low-involvement conditions were differentiated by the same means as in the study conducted by Petty et al. (1983). Participants in the low-involvement condition were presented with text that stated *low* temporal and geographic proximity and importance of feedback to the company. Conversely, participants in the high-involvement condition were presented with text that stated *high* temporal and geographic proximity and importance of feedback to the company.

3.6 Co-Creation Tasks

After the involvement manipulation, all participants in the different treatments completed various co-creation tasks. The same tasks were presented to all participants. These tasks consisted of multiple choice item measures and open-ended questions, in which participants were asked to report their coffee consumption habits and preferences when visiting coffee shops. However, the responses for these tasks were not used in the final data analysis, but served the purpose of creating a co-creation setting in which participants engaged in customer participation. Additionally, these tasks also directed attention away from the manipulations presented in the study and thus served the purpose of limiting hypothesis guessing.

3.7 Second Relationship Framing

When participants had completed the co-creation tasks, they were once again presented with the same type of relationship framing that they were exposed to previously in the survey. The reason for presenting the relationship manipulation twice was to ensure that participants in fact registered this manipulation, and to limit the potential interference the co-creation tasks might have had on the manipulation.

Participants in the communal framing (BFE) condition were once again presented with text that stated that the company was highly appreciative of the favor they were doing the company by participating in the survey. Participants were then asked to answer a few questions regarding how they perceived the company.

Participants in the exchange framing (reciprocity) condition were reminded that they were being rewarded with \$0.40 bonus in exchange for their efforts. They were then asked to answer a few questions regarding how they perceived the company.

Participants in the control condition were not presented with any relationship framing, but were told to next answer a few questions regarding how they perceived the company.

3.8 Dependent Measures and Involvement Manipulation Check

Following the second relationship framing, all treatment groups were presented with the same item measures for satisfaction, purchase intent, and involvement manipulation check. For the first dependent variable, satisfaction, semantic differential scales were used, which according to Westbrook and Oliver (1981) result in the highest reliability. Additionally, a multi-item scale was used to ensure higher levels of internal reliability (Danaher, & Haddrell, 1996). The present study used a seven-item general satisfaction scale developed by Spreng, MacKenzie, and Olshavsky (1996), and further improved by Bruner, James, and Hensel (2001). The scale utilized for purchase intention was a three-item seven-point measure, first presented by Okechuku, and Wang, (1988) and later improved by Bruner et al. (2001). Additionally, in each of the three different multi-item scales, two items were reverse coded to check if participants paid sufficient attention and answered the scales properly.

We also carried out a manipulation check to test whether our manipulation for high and low levels of involvement led to differences in the reported involvement scores. To assess this, participants were presented with a six-item semantic differentials scale. The scale used in the present study was developed by Houston and Walker (1996), and measures the temporary relevance of an object, rather than enduring involvement towards a product category. This way, we made sure that our involvement scale did not measure the general involvement towards

coffee shops, but rather the involvement towards the specific co-creation task with our fictitious coffee shop.

3.9 Demographics

Finally, at the end of the survey participants answered demographic questions which asked for the respondents' gender, age, and employment status. We wanted to check for the employment status, in case unemployed people were over-represented at mTurk, which might have an impact on how they react towards compensation as well as the potential generalizability of the study. After the participants were done with all the questions, they were directed to a window that thanked them for completing the survey.

4. Results

4.1 Participants

Of the 180 participants recruited through mTurk, 28 participants were excluded due to the following reasons; (1) Survey completion time lower than 3 minutes, (2) significant amount of responses missing, and 3) failure to register reverse coding of items. The remaining participants (N = 152) consisted of 78 males and 74 females with a mean age of 36.51 (SD = 11.79). Table 2 shows the employment status of the participants, with the unemployment rate reflecting the national level of 3.9% in April 2018 in The United States (Bureau of Labor Statistics, 2018). This means that the employment status of the participants should not impact their reactions towards compensations in any different way than for the general public.

Table 2: Employment status of participants.

	N	%
Full Time	106	69 %
Part Time	13	8 %
Unemployed	4	3 %
Student	5	3 %
Retired	4	3 %
Homemaker	10	6 %
Self-Employed	9	6 %
Unable to work	3	2 %
Total	154	100 %

4.2 Missing Value Analysis

For the variables of interest, namely satisfaction, purchase intent, and the involvement manipulation check, we conducted missing value analyses (MVA) in SPSS. For satisfaction, there were 12 missing values, and the Little's missing completely at random (MCAR) test showed statistically insignificant results $\chi^2(18, N = 152) = 5.51, p = .998$. We proceeded by imputing missing values for satisfaction using expectation maximization (EM). The same MVA procedure was followed for purchase intention and the involvement manipulation check, where values were also MCAR.

4.3 Reliability Analysis of Subscales and Creation of Composite Variables

The satisfaction scale consisted of 7 items ($\alpha = .92$), the purchase intention scale consisted of 3 items ($\alpha = .85$), and the involvement manipulation check scale consisted of 6 items ($\alpha = .93$). The three different scales all had high internal reliability, and composite variables were created for satisfaction, purchase intention, and involvement manipulation check by averaging the scores across the respective items in the scales.

4.4 Involvement Manipulation Check

We conducted an independent sample t-test to check whether our involvement manipulation in fact resulted in significantly different scores in the participants' involvement levels. The low-involvement manipulation condition ($N = 79$) reported a mean involvement score of 5.39 ($SD = 1.22$), whereas the high-involvement manipulation condition ($N = 73$) reported a mean involvement score of 5.82 ($SD = 0.96$). The Levene's test ($F = 1.47, p = .228$) found a non-significant difference in the variance between the two groups, whereas the t-statistic shows that there is a significant difference ($t = -2.436, df = 150, p = .016$) between the two conditions. Hence, the presented involvement manipulation led to significant differences in involvement, and we proceeded by using the categorical high/low-involvement condition as an independent variable.

4.5 Effects of Framing and Involvement on Satisfaction

The group sizes and average satisfaction scores for the different relationship framing conditions are displayed in Table 3. A one-way ANOVA showed that the effect of framing on satisfaction was significant $F(2,149) = 3.85, p = .024$. A post-hoc pairwise comparison Bonferroni test showed that the BFE condition on

average led to a 0.51 lower satisfaction score than the reciprocity condition ($p = .019$). There were no differences between the control and the BFE condition ($p = .714$), nor between the control and reciprocity condition ($p = .420$). Hence, we do not find support for H_{1A} . However, the present study finds support for H_{1c} , which states that there will be differences in satisfaction between the two framing conditions. More specifically, we see that exchange-based (reciprocity) framing leads to significantly higher satisfaction than communal-based (the BFE) framing.

Table 3: Group sizes and average satisfaction scores for relationship framing conditions

	M	SD	N
BFE	5.57	1.13	52
Reciprocity	6.08	0.81	54
Control	5.80	0.85	46
Total	5.82	0.96	152

Table 4: Group sizes and average satisfaction scores for the two involvement conditions

	M	SD	N
Low-Involvement	5.71	1.00	79
High-Involvement	5.94	0.90	73

The group sizes and average satisfaction scores for the two involvement conditions are displayed in Table 4. An independent samples t-test was conducted to examine the effects of low vs high involvement. The Levene's test ($F = 0.79, p = .374$) showed no significant difference in the variance between the two groups. Additionally, involvement led to no differences in satisfaction $t(150) = -1.49, p = .138$.

We tested for interaction effects between relationship framing and involvement, by subjecting satisfaction to a two-way ANOVA. The corrected model accounted for 6.2% of the variance in satisfaction and was not significant given $\alpha = 5\%$ $F(5,146) = 1.92, p = .094$. Additionally, the interaction effect was also not significant $F(2,146) = .29, p = .972$. Hence, we do not find support for H_{3A} and H_{4A} .

4.6 Effects of Framing and Involvement on Purchase Intent

The group sizes and average purchase intention scores for the different relationship framing conditions are displayed in Table 5. A one-way ANOVA showed that the effect of relationship framing on purchase intention was significant $F(2,149) = 4.48, p = .013$. A post-hoc pairwise comparison Bonferroni test showed that the BFE condition on average led to a 0.57 lower satisfaction score than the reciprocity condition ($p = .010$). There were no

differences between the control and the BFE condition ($p = .471$), nor between the control and reciprocity condition ($p = .436$). Hence, we do not find support for H_{1B} . However, the present study finds support for H_{1D} , which states that there will be differences in purchase intention between the two framing conditions. More specifically, we see that exchange-based (reciprocity) framing leads to significantly higher purchase intention than communal-based (the BFE) framing.

Table 5: Group sizes and average purchase intention scores for relationship framing conditions

	M	SD	N
BFE	5.63	1.19	52
Reciprocity	6.20	0.84	54
Control	5.92	0.86	46
Total	5.92	1.00	152

Table 6: Group sizes and average purchase intention scores for the two involvement conditions

	M	SD	N
Low-Involvement	5.74	1.07	79
High-Involvement	6.12	0.89	73

The group sizes and average purchase intention scores for the two involvement conditions are displayed in Table 6. An independent sample t-test was conducted to examine the effects of low vs high involvement. The Levene's test ($F = 3.85, p = .52$) showed no significant difference in the variance between the two groups. However, involvement led to significant differences in purchase intention $t(150) = -2.42, p = .017$, in which the low-involvement condition on average led to a 0.39 lower purchase intent. Hence, we find significant support for H_2 .

We tested for interaction effects between framing and involvement, by subjecting purchase intention to a two-way ANOVA. The corrected model accounted for 9.1% of the variance in purchase intention and was significant $F(5,146) = 2.92, p = .015$. However, the interaction effect was not significant $F(2,146) = .066, p = .936$. Hence, we do not find support for H_{3B} and H_{4B} .

5. Discussion

The primary objective of the present study is to provide insights into how and why the value outcomes of higher satisfaction and purchase intention are obtained through co-creation. Research within marketing and psychology has shown that the reciprocity heuristic and the BFE result in positive attitude changes in interpersonal relations (Cialdini, 2001; Schindler, 1998; Jecker & Landy, 1969; Williamson et al., 1996). The present study extends these findings from interpersonal relations to a circumstance in which one of the stakeholders is replaced with a company, with the objective of examining whether similar effects take place in this different type of interaction. Additionally, a focal point of interest in the present study is to examine whether there are certain co-creation framing tactics with which companies can reach higher satisfaction and purchase intention, either through the use of the BFE or reciprocity, and thus make their co-creation initiatives more effective.

Results show that framing an interaction as communal, through the use of the BFE, leads to significantly lower satisfaction and purchase intention than framing an interaction as exchange based, through the use of reciprocity. This finding entails that the perceived relationship type is important in co-creation, and companies should compensate their co-creation participants. Additionally, we find that a high-involvement setting leads to significantly higher purchase intention than a low-involvement setting. This suggests that it is important to make sure that participants are involved with the tasks in co-creation to ensure higher purchase intention.

5.1 Findings in the Present Study and a Conceptual Framework Explaining Value Outcome Generation in Co-creation

As our results were not completely as expected, we examined existing research to see if there could be other explanations for our findings. Existing research suggests that satisfaction can often serve as an antecedent for purchase intention (Oliver, 1980; Tam, 1999). It is hence possible that in addition to directly leading to purchase intention, the impact of the co-creation relationship type to purchase intention is also mediated by satisfaction. We therefore conducted a mediation analysis on the data derived from the present study. More specifically, we examined whether satisfaction mediates the effects of relationship framing on purchase intention.

Baron and Kenny (1986) state that there are three conditions that need to be met for such a mediation to be present; (1) purchase intention needs to be explained by framing, (2) satisfaction needs to be explained by framing, (3a) purchase intention is explained by satisfaction when controlling for framing, and (3b) there is complete mediation if the effect of framing on purchase intention has become zero. Both conditions (1) and (2) are met, and covered in the results section above. We conducted a one-way ANCOVA to determine whether condition (3a) and (3b) are met. More specifically, we examined whether the effects of framing on purchase intention changed when adding satisfaction as a covariate. Results showed that the effect of satisfaction was significant $F(1,148) = 112.38, p < .000$ and the effect of relationship framing was no longer significant $F(2,148) = 1.16, p = .318$. Hence, we see that both condition (3a) and (3b) are met, and we can say that the effect of relationship framing on purchase intention is completely mediated by satisfaction.

Based on our findings, we developed a conceptual framework which is depicted in Figure 2. This figure illustrates the mechanism found in the present study for how the value outcomes satisfaction and purchase intention are generated in a co-creation setting through relationship-type framing.

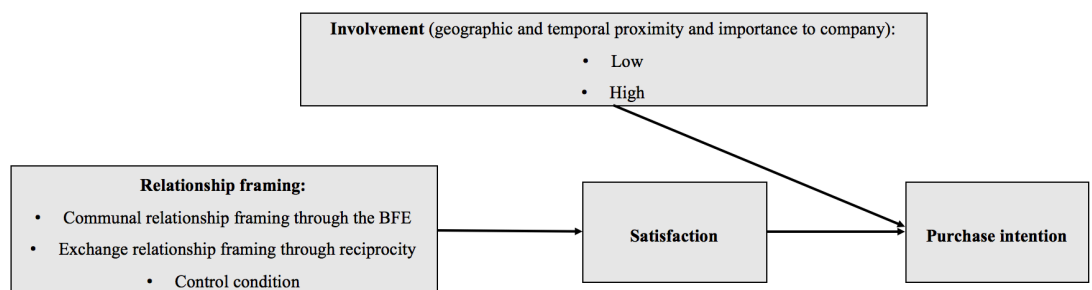


Figure 2: Conceptual framework found in the present study.

Finally, we conducted a two-way ANCOVA to test the conceptual framework illustrated in Figure 2. Framing and involvement were included as fixed factors and satisfaction was added as a covariate. The model was significant $F(6,145) = 22, p < .000$ and accounts for 47.6% of the variance in purchase intention ($\eta = .476$). This, can be considered as relatively high effect size and provides solid insight into how the value outcome purchase intention is generated in a co-creation setting. However, questions still remain unanswered as to how and why satisfaction is created in a co-creation setting, which we will address in the following sections.

5.2 Potential Mechanisms Underlying the Findings

Our results indicate that people are unwilling to engage in a communal relationship during co-creation. It might be that, for some reason, consumers expect co-creation to always be exchange-based, especially with a commercial partner, and thus experience lower levels of satisfaction when this expectation is violated. Aggarwal (2004) finds that consumer actions which contradict their own existing relationship norms lead to lower evaluations of the company. His conceptual model suggests that consumers assess brands based on the relationship they form with them, and that this evaluation applies to any actor in the society. It might be that in the present study, the participants only wanted to form an exchange relationship with the brand, and thus experienced significantly lower levels of satisfaction when exposed to the communal condition than to the exchange condition. We suggest that there are two alternative explanations for such a reaction. Firstly, it might be that consumers are only willing to take part in co-creation when their effort is equally compensated, especially if they have no previous relationship with the company. This ties the interaction to the perception of fairness: if the customer feels like the compensation is less than the value the company is able to extract from the contribution, their overall value perception of the co-creation outcome decreases (Fang et al., 2008). Secondly, it might be that since all the participants were recruited from a platform where they expect monetary rewards in exchange for tasks, they were from the start not willing to engage in a communal relationship. Consequently, the participants expected to be rewarded for their effort during co-creation. This expectation was matched in the reciprocity condition and resulted in significantly higher levels of satisfaction and purchase intention than when the expectation was not matched in the BFE condition.

Parasuraman, Zeithaml, and Berry (1985), provide extended insight to the propositions made by Aggarwal (2004) through The Service Quality Model, which we can use as a framework for examining why communal relationship framing leads to lower satisfaction and purchase intention levels. The framework outlines consumer expectations and service gaps that impact the experience from the consumer perspective. The co-creation process can be aligned with service provisions, because they both share similar steps in execution: expectations, external communication, perceived experience, and past experiences. The quality judgement of the outcome, and the consequent satisfaction, depend on comparing

expectations with the experienced performance. Parasuraman et al. (1985) add that these expectations are influenced by communication from the company, word-of-mouth, personal needs, and past experiences. Consumers might be accustomed to tangible co-creation outcomes, such as monetary compensation, discounts, better fit of offering, or simply the product or service that they participate in creating (Mustak et al., 2013). An example of this is the IKEA effect, which constitutes that consumers are willing to bid more for tangible products that they have helped create (Norton, Mochon, & Ariely, 2012). Completing co-creation as a favor does not result in any immediate tangible outcomes, thus contradicting these past experiences. This might in turn overrule the need to form communal relationships with companies during co-creation and set expectations for an exchange relationship. Trying to engage in a communal relationship with consumers thus creates an expectation gap, because it does not match with what the consumers have experienced before and what their personal needs from the interaction are. This is also due to decrease satisfaction and purchase intention levels for people who are exposed to the BFE.

Another perspective to consider when interpreting our results is that of loss aversion. Tversky and Kahneman (1986) describe a value function in which positive or negative deviations are perceived as gains or losses. Loss aversion is a significant property of the value function, which describes how people tend to respond more extremely to losses than gains. The design of the present study was such that the study title informed all participants of the prospect of winning, or gaining, an additional \$0.40. This information was added to the study title on mTurk to attract enough people to take the survey and not shy off due to the otherwise low base reward of \$0.60. Providing this information makes the framing and loss aversion aspects of prospect theory highly relevant when trying to provide alternative explanations for how the different framing conditions in the study were perceived by the participants. We believe that informing the participants in the communal relationship framing condition that the company was very grateful for the favor they were doing by participating, might have led to a perception of lower probability of receiving an additional \$0.40 in the minds of the participants. Hence, the BFE framing condition might have been evaluated as a “loss”. Conversely, when participants in the exchange relationship framing condition were informed that they were going to receive an additional \$0.40, it is likely to have been evaluated as a “gain” respectively. In the control condition,

participants were not presented with a relationship framing, but were simply directed towards the next part of the study, with little to no indication to whether participants will receive an additional \$0.40. Hence, if participants perceive the communal relationship framing as significant indication of a loss (losing the prospect of gaining an additional \$0.40), then this might explain the significantly lower satisfaction and purchase intention scores for this group compared to the exchange relationship framing.

5.3 Managerial Implications

The present study also offers several implications for managers to consider before utilizing co-creation. Managers should keep in mind that consumers might not be willing to form communal relationships with companies during co-creation. Attempting to frame the relationship as communal might result in significantly lower levels in satisfaction and future purchase intention, compared to an exchange relationship. Likely due to consumer expectations, co-creation yields the most positive outcome when paired with compensation. The present study utilized monetary compensation in exchange for co-creation, but offering discounts or the possibility to take part in a raffle are also common ways to offer economic benefits to participating consumers.

Nevertheless, just compensating consumers does not seem to be sufficient. The request to co-create and the way the request is framed needs to emphasize the exchange-type nature of the interaction for the consumer to reach significantly higher levels of satisfaction and purchase intention. The present study reminded the consumers three times of the monetary compensation they will receive in exchange for their effort. However, co-creation settings will vary in form, and managers should therefore adjust the framing and the number of compensation reminders to optimally fit their specific setting.

Additionally, our study found that higher levels of involvement lead to higher purchase intention. The present study manipulated involvement through geographic and temporal proximity, as well as through emphasizing the importance of the task to the company. The purpose was to activate the consumers' elaborative thought processes. Hence, we suggest that managers involve their consumers, whether new or old, in the task by reminding them how to purchase their offerings and how important the task is for them. This needs to be done before the participants complete the tasks, in order to enhance their

involvement in the actual steps of the whole co-creation process and activate their elaborative thought processes.

Offering consumers opportunities to potentially win gift cards is common practice among many companies doing co-creation, for example when universities collect course feedback. Considering Tversky and Kahneman's (1986) research on loss aversion and how people tend to respond asymmetrically to gains and losses, participants may perceive losing the prospect of winning previously foreshadowed potential gains quite negatively, for example if they never win the gift card. This might in turn result in significantly lower satisfaction and purchase intention, because the company does not fulfil their side of the exchange relationship. Managers should therefore carefully assess to which extent participants have cumulatively lost such prospects of potential gains, and consider other types of compensation as well, such as discounts.

Finally, managers should nevertheless implement these findings in their co-creation activities with caution, especially if the proper completion of the task is essential. The present study did not analyze the quality and usefulness of the co-creation task responses between the treatment groups. Amabile (1996) suggests that extrinsic motivation might diminish creative problem solving skills, in addition to which there is a chance that consumers who are rewarded do not pay sufficient attention to the task, but only aim to maximize their money-to-time – ratio. Hence, managers should continuously monitor the quality of participating consumers' task completion and whether to implement conditional compensation in which a certain level of quality needs to be met.

5.4 Limitations of the Present Study

Our study also has some limitations. We hypothesized that high-involvement situations are best paired with tasks that require cognitive effort, which in turn can lead to cognitive dissonance in the mind of the consumer. Cognitive dissonance reduction can activate the BFE (Jecker and Landy, 1969), a psychological phenomenon in which the helper views the target of the favor more positively as a result. There are two limitations in the design of the study that might have prevented the BFE from being activated. Firstly, due to how the data collection platform mTurk works, we also needed to give monetary compensation to people in the communal relationship condition. Thus, the co-creation task was not fully completed as a favor, even though it was framed as such. Secondly, there is a

chance that the participants did not experience high enough cognitive dissonance to activate a sufficient dissonance reduction process and the consequent BFE to result in an attitude change. This is because the BFE works best in a situation where the target is neutrally or negatively viewed (Jecker and Landy, 1969), but our fictional company might have induced positive evaluations. It might also be that the reward offered in the reciprocity-condition (\$1) was too large compared to the time requirement of the study, which increased the satisfaction and purchase intention scores of the people in this condition regardless of their involvement level. Additionally, there is a chance that the participants' in-built need for social interaction was not activated, because the brand used was fictional, and thus previously unknown. Epley et al. (2007) state that especially strong brands tend to become anthropomorphized, which is why instead using an existing strong brand might have resulted in higher levels of anthropomorphism and thus different outcomes.

Finally, while the present study completed a manipulation check for the level of involvement, it did not test for the effectiveness of the relationship type manipulation. We found significantly different levels between the exchange and communal relationship conditions, but cannot fully conclude that the differences stem from the relationship type.

5.5 Suggestions for Future Research

Our results suggest that people do not want to complete favors for companies in a standard co-creation setting where the consumer acts as an information source. Future research might examine if the results change when the consumer acts as a co-developer instead (Fang, 2008). Co-developing happens in more extensive co-creation settings like software development. Many companies utilizing consumers as co-developers in co-creation only reward the best solution instead of rewarding every individual customer who co-creates. For example, Nasa Tournament Lab has hundreds of entries for each of their co-creation tasks, even though just the best solution wins. Nevertheless, there is a chance that not only the rewarded participant increases their satisfaction, but that also the non-winning participants might experience positive attitude changes. Investigating satisfaction levels for this type of co-creation might therefore be fruitful.

Another direction for future work would be to see if completing co-creation as a favor differs across industries, as well as between NGOs and public and private

companies. Also, future research could test the BFE as a part of service recovery where the company is viewed negatively. A negative co-creation context might sufficiently activate cognitive dissonance and subsequent dissonance reduction that positively alters attitudes without compensation.

The present study examines how and why value outcomes are generated in a co-creation setting using a fictive brand. Future research might also account for pre-existing brand knowledge while testing the psychological mechanisms in the present study with strong anthropomorphized brands. More specifically, the effects of compensating participants and relationship framing could be examined together with different levels of anthropomorphism. These levels could be varied through different types of company spokespersons who are categorized at different levels along the continuum in degree of anthropomorphism, as proposed by Touré-Tillery and McGill (2015). For example, future research could look into differences between the following types of spokespersons; (1) human spokesperson, (2) brand character spokesperson, and (3) anthropomorphized product spokesperson. Varying the degrees of anthropomorphism would provide further insight into whether findings from psychology pertaining to interpersonal relations can be extended to interactions between consumers and companies.

6. Conclusion

Value outcomes of co-creation have been an increasingly important topic for the last two decades. More and more companies have started to recognize the importance of co-creating with their customers, but existing literature has been overlooking the customer's role in creating value outcomes. Consumer psychology and the underlying psychological mechanisms can serve as means to explain why and how co-creation leads to value. Our results indicate that framing the relationship type between the company and the consumer in the co-creation description has a significant impact on both satisfaction and purchase intention. Consumers that are exposed to an exchange relationship framing reach significantly higher levels of satisfaction and purchase intention towards the company, than those consumers who are encouraged to form a communal relationship. Additionally, consumers who are highly involved in the co-creation task reach significantly higher levels of purchase intention than those who are less involved. We suggest that consumers' pre-existing expectations about interactions with companies, as well as their elaborative thought processes, explain these results, and propose that managers should reward consumers for their co-creation efforts.

7. References

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Appendix

Appendix 1: Survey Template

1: Company Logo and Information



Hi there!

We are South Shore Coffee, a chain of coffee shops looking to serve smiles and the best cup of coffee to our customers. We were founded in 2014, and have ever since taken pride in grinding our own coffee beans, and serving delicious hot beverages to coffee lovers. In the past four years, we have grown from one shop and two employees to eight shops and 25 employees.

In our shops, you can find a wide range of beverages from espressos to lattes and freshly squeezed juices, as well as homemade pastries and sandwiches. We are constantly looking to improve our services and offer our customers the best experience possible. We are super excited about what the future holds for us!

2: First Relationship Framing Manipulation

Exchange relationship (reciprocity) condition

In exchange for your effort to help us improve our products and services, we will compensate you with an extra \$0.40 bonus, which will be paid after you have completed the survey (\$1 total compensation).

Next you will answer a series of questions about coffee and coffee shops.

Communal relationship (the BFE) condition

We at South Shore Coffee are highly appreciative for the favor you are doing for us by participating in this survey. Your participation will help us improve our products and services and we are very grateful for your help.

Next you will answer a series of questions about coffee and coffee shops.

Control condition

Next you will answer a series of questions about coffee and coffee shops.

3: Involvement Manipulation

High-involvement condition

We are planning to open two new South Shore Coffee shops in your geographic area soon. To do this, we need to learn about what type of preferences you have for your coffee shop experience. Your input for this survey is highly important to us and will be used to design our new shops to match the preferences of the people in your area.

Low-involvement condition

While we are not planning to open any new shops in the near future, we at South Shore Coffee are always looking to learn what type of preferences people have for their coffee shop experience. The results from this study might be used to improve our services.

4: Co-creation Tasks

How often do you drink coffee? (select one of the following)

Every day

Two to three times a week

Once a week

Less than once a week

Never

Where do you drink coffee? (select all that apply)

At home

At school, university, workplace

Restaurants

In coffee bars

Other (please specify)

What kind of coffee do you drink? (select all that apply)

Dark-roast

Light-roast

Decaffeinated

Specialty coffees

Other (please specify)

Which times of the day do you drink coffee? (select all that apply)

Morning

Noon

Afternoon

Evening

Night

We are considering changing our logo. Out of the following, please click on the logo you prefer the most:



Based on your past experiences, what are your 3 favorite aspects about going out to a coffee shop?

1

2

3

Based on your past experiences, what are your 3 least favorite aspects about going out to a coffee shop?

1

2

3

If you go to a coffee shop, what food would you prefer to buy? (select all that apply)

Sandwiches

Muffins

Cakes

Scones

Donuts

Other (please specify)

Please describe in detail what your dream coffee shop looks like. For example, what kind of seating (large sofas, chairs, booths), lighting, music, food selection, and overall style (modern, rustic, romantic) you prefer.

5: Second Relationship Framing Manipulation

Exchange relationship (reciprocity) condition

We would like to remind you, that you are rewarded with \$1 in exchange for your efforts. Finally, we have a few questions regarding what you think about us.

Communal relationship (the BFE) condition

We are very grateful for the favor you are doing us by participating in this survey. Finally, we would like to ask you a few questions regarding what you think about us.

Control condition

Finally, we have a few questions regarding what you think about us.

6: Dependent Measures

Satisfaction measurement

Based on this experience, how do you feel about South Shore Coffee so far?

	3	2	1	0	1	2	3	
Satisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Dissatisfied
Pleased	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Displeased
Unfavorable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Favorable
Pleasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unpleasant
I like it very much	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I didn't like it at all
Frustrated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Contented
Delighted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Terrible

Purchase intention measurement

Would you like to visit South Shore Coffee?

	3	2	1	0	1	2	3	
Yes definitely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	No, definitely not

Would you buy South Shore Coffee products if you happened to see their shop?

	3	2	1	0	1	2	3	
Yes definitely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	No, definitely not

Would you actively seek out South Shore Coffee in order to purchase their products?

	3	2	1	0	1	2	3	
Yes definitely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	No, definitely not

Involvement manipulation check

Using the following scales, please indicate how you felt about this task with South Shore Coffee.

	3	2	1	0	1	2	3	
Unimportant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Important
Of no concern to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Of concern to me
Relevant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Irrelevant
Means nothing to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Means a lot to me
Matters to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Doesn't matter
Insignificant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Significant to me

7: Demographic Measures

Gender

What is your gender?

Male

Female

Other

Age

What is your age?

Employment status

What is your current employment status? (select all that apply)

Employed full time

Employed part time

Unemployed

Student

Retired

Homemaker

Self-employed

Unable to work

Other

8: Final Page

Thank you for participating.

Your validation code is:

6164693

To receive payment for participating, click "Accept HIT" in the Mechanical Turk Window, enter this validation code, then click "Submit".