

The Role of Social Facilitation Theory on Consumer Decision Making: A Conceptual Framework

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Social influence has been a topic of interest in consumer behavior. Researchers have shown that non-interactive social presence can influence consumer behavior. Does the presence of others affect consumer decision making too? Based on social facilitation theory, we propose that in a retail store setting, consumers take longer and make inaccurate decisions in the presence of non-interactive others if the decision making task is difficult (many different brands with different attribute levels are available) than if the decision task is easy. Personality trait, self-sufficiency, plays a moderating role in this relationship. The research has many managerial implications.

INTRODUCTION

Presence of others influences an individual's behavior and this phenomenon is profound in problems of imitation, conformity, competition, helping, aggression etc. This is defined as social influence which has been a very interesting topic in consumer behavior. How the behavior of other consumers or sales persons affects consumers is a question of interest. In a typical consumption situation, consumers encounter many other individuals. They interact with some of them (for example, sales people) and they have no interaction with some others (for example, consumers in another aisle). However, they may be influenced by interactive as well as non interactive people.

Sales persons' presence and its effect on consumers is often defined as interactive social influence (Childers & Rao, 1992) since consumers usually interact with a salesperson. On the other hand, in non-interactive social presence, people are present but are not interacting with each other. Interestingly, they still can influence the behavior of others (Dahl, Manchanda & Argo, 2001). It has also been found that the number and proximity of others affect the consumer's emotion and self-presentation (Argo, Dahl & Manchanda, 2005). Some of these influences are conscious and some are non-conscious. Consumer research has explored the non-conscious influence of objects and people. It has been shown that what the other people consume can affect one's preference and the effect can be attributed to mimicry (Tanner, Ferraro, Chartrand, Bettman & Van Baaren, 2007). Therefore, research has documented that social presence affect behavior (self-presentation) and preference. However, does the presence of non-interactive others affect consumer decision making? The present research investigates how the presence of non-interacting others influences consumers decision making. Does it affect the amount of time spent to make a decision for a product? Does it affect the choice?

This is a very intriguing and important question because most of the time, consumers' make their decision in an environment where people are present but are not interacting. If we think about a store where people are buying products, typically others are also present in the same aisle or a couple of meters

away. Most of the time, they don't interact. If the presence of others which is called "mere presence" influences one's choice, it is very important to know the effects to better understand the consumer's behavior in this everyday situation.

In the quest of investigating this research question, we based the research on social facilitation theory which is one of the oldest theories in social psychology. The term "social facilitation" was first used by Allport (1924). Later, Zajonc (1965) described social facilitation in a seminal review which was a major contribution in this stream of research. According to him, social presence improves performance of a simple or well-learned task and impairs performance of complex and new task. This proposition has been used in several tasks such as problem solving, judgment etc.

Therefore, the goal is to examine the effect of social facilitation theory in the context of consumer's decision making. Choosing a product from a variety of different brands based on their attribute levels and the relative weights of each attribute can be defined as a task (consumption task). If this is an easy task for a consumer, the social facilitation effect predicts that, his performance will be improved in the presence of others. But if this task is difficult for him, his performance will be impaired. The performance on this choice task can be measured by the time required to take the decision and the accuracy (match with the "correct" brand) of the decision. We, then, investigate the moderating effect of a personality trait called self-sufficiency in this relationship. This research has huge managerial implications. Depending on the product, retail store organization might have to be changed since in some cases crowd may enhance or impair the decision making process of the consumer.

The paper is organized as follows. First, related research is discussed and propositions are explained. Moderating role of self-sufficiency in this relationship is also discussed. At this point, the research model is introduced. Possible consumption situation scenario of this effect is discussed. The paper ends with the conclusion and discusses its limitations.

THEORETICAL DEVELOPMENT

Social Facilitation Theory (SFT)

Social facilitation refers to the general phenomenon that physical and cognitive performance is improved/ impaired when an individual is being observed. The factor that determines if the performance will be facilitated or inhibited depends on whether the task that the individual is performing is well learned (simple) or novel (difficult). Research has shown that well-learned tasks are facilitated under observation, whereas novel tasks are inhibited under observation (Zajonc, 1965)

The behavior change due to social presence was observed long ago (Allport, 1924). At first the effect was only studied where several people were taking part in the same action and how one's behavior changes because of other's action. Research then shifted toward non-coactive or passive observers. It was found that the behavior of animals changes even when they are not performing the same task (not co-acting), only being watched (Guerin, 1993). However, there were some apparent inconsistencies in the result of these researches. Task performance improved in some cases and got impaired in other cases.

Zajonc (1965) introduced the moderating variable called task complexity and resolved these issues. He used Hull-Spence drive model to explain the phenomenon. According to him, in mere presence of others, there is an increased arousal which comes from automatically induced drive. This arousal gives rise toward habitual or dominant response. Thus, for a habitual or simple task, the response is usually the correct one and increased arousal leads to performance improvement. On the other hand, for a complex or non-habitual task, the response is usually the incorrect one and increased arousal leads to performance impairment. Although this explanation seems flawless, there is a controversy about the mediating variable. From the literature, four possible explanations can be summarized. There are uncertainty, evaluation apprehension, self-awareness and distraction (Uziel, 2007).

Zajonc later modified his drive theory based on uncertainty which was also developed by Guerin's monitoring theory (Guerin, 1993). It says that in the presence of others organism goes in high level of alertness to deal with any threat which may come. From this alertness, arousal is induced.

Cottrell (1972) modified the drive theory based on evaluation apprehension theory. It suggests that a person becomes aroused only when he is in fear that he will be evaluated by others. This apprehension comes from previous experience. Many research has suggests that social facilitation effect is only dominant in the people who apprehend the evaluation more.

The third explanation is based on self-awareness. It is developed by (Duval & Wicklund, 1972). It argues that in the presence of others, one becomes more conscious and compares oneself with ideal. This motivates behavior. Thus added energy improves performance and excessive effort leads to performance impairment.

Lastly, the distraction-conflict theory (Baron, Moor & Sanders, 1978) proposes that presence of others takes away attention. This attentional-conflict either increases drive or cognitive overload. Therefore, simple task performance is improved and complex task performance is reduced.

The Effect of Social Facilitation Theory (SFT) in Various Context

Social facilitation effect has been observed in wide range of contexts. The obvious contexts of this effect include sports, problem solving and not so obvious contexts include eating, stroop task, judgment etc. (Huguet, Galvaing, Monteil & Dumas, 1999). Recently, the effect has been examined in human-computer context. It was found that easy letter typing task performance is improved in front of a computer icon. On the other hand, the performance was decreased for a difficult letter typing task in front of the computer icon (Hall, 2008). The effect is prominent in online auction context too where the performance of bidders improves when there was a higher level of virtual presence (Rafaeli & Noy, 2002).

In a study of real marketplace situation, Sommer (1992) found social facilitation effects on shopping behavior where shoppers accompanied by others spent more time in the store and purchase more compared to lone shoppers. Similarly, consumption of drinks in pubs and coffee houses was affected by the presence of others. With groups, people were found to drink more. But it should be noted that it is not the social facilitation effect in its pure form. Shoppers accompanied by others who are interacting to each other is not the strict definition of mere social presence in the context of social facilitation. According to Zajonc (1965), if other people interact, provide cues for the problem, compete or co-act, then, it is not purely social facilitation rather some kind of imitation.

Although social facilitation effect has been studied in many problems, social facilitation effect, in marketing, in its pure form has only been examined by Faro & McGill (manuscript under revision in JCR) only. The authors documented that the presence of others affect variety seeking. In the presence of others, people are less variety seeking than when they are alone. The authors found evidence that the effect is more pronounced in people who are high in social anxiety. Social anxiety as a moderator of social facilitation effect has also been examined in stereotyping response context (Lambert et al., 2003). Gaumer & LaFief (2005) suggested the application of SFT in different Marketing contexts, such as crowding in a store, wait in line etc. However, the authors didn't hypothesize any effect or investigate any specific situation.

Task Performance in Marketing Context

As mentioned before, the aim of this research is to investigate if consumer decision making is affected by mere presence of others. It should be noted that social facilitation has an effect on both physical and cognitive tasks. Various cognitive task such as information search, storing, aggregation, evaluation are frequently used in consumer decision making process (Bettman, 1979). Multi-attribute choice task (each of the choice has more than one attribute) is viewed as typical decision making problem which is encountered by the consumers every day (Payne, Bettman, Johnson, 1993). In this decision task, one chooses one brand among many brands or alternatives and alternatives have some common attributes where the levels of the attributes usually vary. For an example, when a consumer goes to buy a sunscreen, there might be couple of brands and each has different value for SPF, moisture, cream level etc. The consumer has to perform a decision task by choosing one of the brands by evaluating the brands in terms of SPF, moisture and cream level.

This type of decision task performance has been studied in the literature. Bettman & Zins (1979) examines the effect of information format (How attribute information is presented) and the cognitive strategy taken to perform a decision making problem. The problem was to choose one brand among a set of brands by using different strategies. The performance of decision making problem was measured by accuracy, choice time and subjective reaction.

Rong-Fuh, Chien-Huang, Wen-Hung, Sheng-Hsiung (2009) studied the effect of music on multi attribute decision making task. The performance was measured by the time taken by the subject to reach a decision and its accuracy. The task difficulty was manipulated by varying the cognitive strategy used to reach a decision. Participants were asked to follow a specific cognitive strategy to solve the problem and were given a set of weight for attributes. The accuracy was measured by matching the participant's answer to experimenter's answer which was based on the given attribute value.

Earlier, Jacoby, Speller & Berning (1974) ran this experiment in a different problem. In his study, participants expressed relative importance of the attributes and ideal attribute value in their opinion. They, then, solved a decision problem based on attribute and their values. The accuracy was tested by matching participant's choice with ideal choice. Lastly, Stone & Kadous (1997) examines how the task related emotion affect decision performance (multi attribute choice task) and performance was measured by time and accuracy (accurate decision meant matched participant's choice and experimenter choice).

Since this research investigates the social facilitation effect in the context of consumer decision making or choice task, following the previous researches, the performance of this task can be measured by choice accuracy and the time taken to reach a choice. The following construct definitions are adapted:

Non Interactive Social Presence

As mentioned earlier, according to Zajonc (1965), pure social facilitation occurs when there are people around an individual but they are not communicating in any way. Moreover, they are not co-acting (performing the exact same task with the same goal in mind), providing cues (giving some hints in any way that will lead to performance improvement of the individual), competing (there is an urge to improve performance relative to others) and others are not evaluating the performance of the individual. They are only spectator.

Task Performance

The task performed has to be a physical or cognitive task. For the purpose of this research, based on the literature, we have chosen to measure the performance of a decision task which is a cognitive task. The task is to choose one brand out of several brands and the brands differ in terms of their attribute values. Brands can be described by a set of common attributes. The performance measures are time taken to reach a decision and the accuracy of the choice.

Social facilitation effect predicts that the performance of a simple or habitual task will be improved and that of complex or new task will be impaired in the presence of others than when working alone. As mentioned earlier, in this study the task is a decision making task whose performance is measured by its accuracy and time to reach decision. Therefore, if the performance of this task is improved, time taken to choose a brand will be decreased and the "right" brand will be chosen. On the contrary, performance impairment will mean increase in time taken to reach a decision and choosing a "wrong" brand. Based on these, the propositions are

Proposition 1: The performance of a simple decision making task will be improved (the time taken to reach a choice will be decreased and the choice accuracy will be increased) in the presence of others than when working alone.

Proposition 2: The performance of a complex decision making task will be impaired (the time taken to reach a choice will be increased and the choice accuracy will be decreased) in the presence of others than when working alone.

Moderating Role of Personal Traits

It is obvious that some people are more prone to social influence than others. There are many personality traits that have been investigated as moderators of social facilitation effect.

The personality traits neuroticism, orientation, and self-esteem have been examined as the moderators of social facilitation effect. People who are high in neuroticism scale was found to be associated with impaired performance in social presence compared to performance in alone condition. Moreover, individuals with high self-esteem experienced performance improvement and individuals with low self-esteem experienced performance impairment in the social presence (Terry & Kearness, 1993). Locus of control is also a moderator in social facilitation effect. The performance of the individual with external locus of control is impaired in the presence of other people. On the other hand, performance of the individuals with internal locus of control is improved in the presence of other people (Martin & knight, 1985). The other moderators of this effect are Type A personality (Gastorf, Suls, & Sanders, 1980) and the need for social approval (Adams, Beatty, & Behnke, 1980). In our study, we introduce self-sufficiency as the moderator for social facilitation effect in the context of consumer decision making.

Self-Sufficiency

Individual differs according to the extent to which the person is dependent upon others in the ordinary affairs of life. Some individuals frequently need advice, some often need to receive expressions of sympathy, encouragement, or appreciation; others rarely require any such forms of stimulation. Again, some are unhappy when they are by themselves, others prefer to be alone. In a word, people differ in the extent to which they are "self-sufficient". As the name indicates, the self-sufficient personality trait is characterized by self-sufficiency, resourcefulness and avoidance of social contact in one's own decision-making (HSRC 1995).

Self-sufficiency is one of the sixteen factors of personality which was introduced by Cattell, Eber & Tatsuoka (1970). Self-sufficient people are self-reliant and often individualistic. They are confident and rely on their own judgment. High self-sufficient people may have trouble collaborating. Individuals who are low on self-sufficient scale adhere to groups and like affiliation. They tend to prefer being around other people, and enjoy social groups and working in teams. Very low scorer may have difficulty working individually.

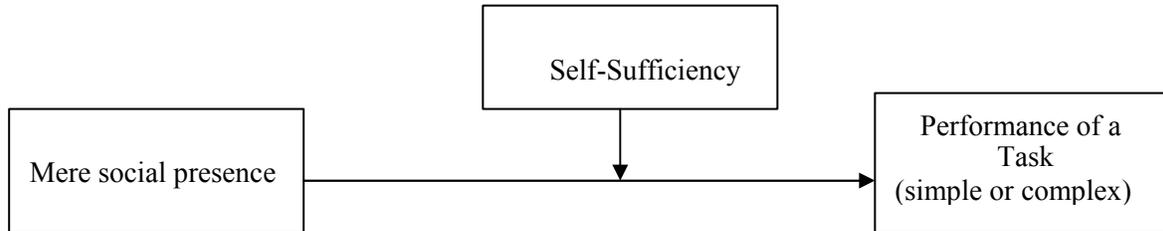
Actually, self-sufficiency is a feeling of being satisfied with oneself, reluctant to be interested in another person or his/her problems. It is inversely related with low self-esteem. In the literature, it has been found that self-sufficiency has an inverse relationship with alcohol consumption (Twisk, Snel, Kemper & Mechelen, 1998). Self-sufficient people also termed as "thick-skinned" (Horsch & Davis, 1951) as they ignore advice of others. Self-sufficient people are confident and less concerned about others. They are less interested in people and their actions; they will not have anxiety in the presence of other people. It logically follows that individuals who are invariant in emotion with people and without people around them, they will not be aroused in the social presence. As discussed before, social anxiety trait has been found to moderate the social facilitation effect. People who feel anxious (because of comparison, apprehension etc.) in the social presence, will show greater effect of social facilitation. In the same manner individuals who are less sensitive about other people and thus social presence will not feel arousal and will not care about comparison. Thus it is logical that people high in self-sufficiency score will show lesser effect of social facilitation.

So, in a nutshell, if a person cares about other's opinion, action, he/she will more likely not to ignore any person around. He will notice social presence. On the other extreme, if it does not matter to a person what others think and what they do, he will not care about the presence of others. Thus in the first case, it is more probable that the person will be aroused and in the second case, he will not be. People who score low in this trait are socially dependent and care about others' opinions and advice. On the other hand, high score people are self-content and do not care much about other people's opinion (Cattell, Eber & Tatsuoka, 1970). Therefore, SFT effect should be more pronounced in the former case than latter.

Proposition 3: The effect described in proposition 1 & proposition 2 will be more pronounced in people who are lower in self-sufficiency personality scale than who are higher in that scale.

In Boxes and arrows model:

FIGURE 1
CONCEPTUAL MODEL OF THE EFFECT OF SFT ON THE
PERFORMANCE OF DECISION TASK



A CONSUMPTION SCENARIO

This research introduces conceptual model and hypotheses related to SFT effect on performance of decision task. The next section details a typical consumption scenario where we may encounter social facilitation theory and its effect.

Task

In a typical consumption situation, a consumer may choose to buy a camera among many brands. A consumer often has some specific requirements in mind while buying the product. For example, she/he might have some important attributes about the product to consider. For the sake of simplicity, let us assume that there are 5 brands of cameras. The cameras differed in their image quality, ease of use, camera size and price (Table 1) and in addition zoom quality and wireless capabilities for difficult task (Table 2).

The most important thing in consumer mind about camera might be image quality (as high as possible) then ease of use, followed by camera size and price. (For difficult task, the order was, image quality, ease of use, camera size, zoom quality, wireless capabilities and price. Consumers will choose one of the cameras from the 5 brands of camera according to consumer's criteria for quality camera. The importance factors are called weight given for each attribute. To choose the best brand according to his/her importance factor, the consumer may want to multiply the weight with the attribute value and add all the numbers for each brand. Logically she/he should choose brand with highest number (weighted additive rule, WADD).

Decision difficulty is usually increased by varying the number of attributes (4 vs. 6) for easy and difficult task respectively. SFT predicts that when a consumer has a difficult task (choosing a brand among 5 brands each having 6 attributes), the consumer is more likely to choose the "correct brand" (the brand with highest number; in this case camera 2) in less amount of time if there is no people around him/her as opposed to many people around. On the other hand, when a consumer is faced with easy task (choosing a brand among 5 brands each having 4 attributes to consider), the consumer will choose the "correct brand" (in this case Camera 1) in less amount of time if there are non-interacting people around him as opposed to no one. The consumers who are high in self-sufficiency scale will not exhibit the same pattern.

TABLE 1
STIMULUS FOR EASY TASK (SOURCE: LANTOS, 2015)

	Image Quality**	Ease of use	Camera Size	Price	Result after WADD
Camera 1	10	8	6	4	80***
Camera 2	8	9	8	3	78
Camera 3	6	8	10	5	73
Camera 4	4	3	7	8	47
Camera 5	1	5	8	7	42
Importance*	4	3	2	1	

TABLE 2
STIMULUS FOR DIFFICULT TASK (SOURCE: ADAPTED FROM LANTOS, 2015)

	Image Quality**	Ease of use	Camera Size	Price	Zoom Quality	Wireless Technology	Result after WADD
Camera 1	10	8	6	4	5	3	149
Camera 2	8	9	8	3	7	9	167***
Camera 3	6	8	10	5	3	10	150
Camera 4	4	3	7	8	2	8	97
Camera 5	1	5	8	7	8	6	106
Importance*	6	5	4	1	3	2	

*Importance of each criterion is scored on a scale where 1=least important and 4=most important

** Brand ratings are scored on a scale where 1= very poor performance and 10=excellent performance

*** Highest number

CONCLUSION AND MANAGERIAL IMPLICATIONS

The research examines how consumer decision making changes in the mere presence of others. It is predicted from social facilitation effect that the time taken to reach a decision increases and the accuracy of the decision decreases in the mere presence of others when the decision making task is difficult but the reverse effect is observed when the task is simple. The research also identifies a personality trait “self-sufficiency” which plays a moderating role in this phenomenon. People who scores high in this trait are less anxious about the social presence and thus less aroused. Consequently, the social facilitation effect should be less pronounced in them regardless of task difficulty.

The research helps to better understand the effect of mere social presence on consumers in a retail context. As it can be seen, mere presence may actually alter the choice and time required to decide. How consumers behave in the presence of others (who are just shopping in another or same aisle) is an important phenomenon. Consumers, who take more time to decide on a particular product or choose a wrong product in a crowded place, may, in fact, dislike the store. This research introduces the conceptual model based on well-grounded theory which is the main contribution of the paper. On the retail managerial side, based on the fact that a particular product choice will be a simple or difficult task, retail managers may organize the store in such a way that consumers are less likely to encounter other consumers when facing a difficult product choice. Moreover, retail managers also need to pay attention to crowd management. Crowd outside the store (long queue) may signal popular store, however crowd inside the store may impair consumer decision making performance. Managers need to take a holistic approach while handling crowd.

Another phenomenon that has retail management is the area of self-control. In attentional-conflict theory of social facilitation argues that mere presence of others takes away cognitive resources and that is the reason why facilitation effect occurs. Now, if consumers have less cognitive resources available in the presence of others, will they fail to perform any self-control task at that time? Will they be involved in impulse buying in a crowded store than in quiet store?

Another potential research direction might be the investigation of other moderating factors. Research has shown that when supervisors/managers monitor workers performance, performances increases in case of skilled worker and decreased for unskilled worker. It has also been found that as the number of workers grow, given only one supervisor, the effect was less pronounced. Thus in consumer behavior, if it is a really crowded place where people are lost in crowd, the effect may be less pronounced. This is also supported by de-individuation theory. This research towards understanding the effect of mere presence on decision making is only a first step. Future research in this area is absolutely necessary.

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