THE APPLICATION OF COGNITIVE DISSONANCE THEORY
IN MANAGEMENT AND MARKETING

Cognitive dissonance is a negative affective state that results from an individual experiencing two or more contradicting thoughts. It influences their decision-making abilities by altering their existing attitude, belief, or behavior. The theory assumes that individuals prefer cognitive consistency and any deviation to that will create an unpleasant feeling. As a result of cognitive dissonance, individuals come under pressure to remove one of the two or more contradicting cognitions to restore consistency and to justify their action. In other words, cognitive dissonance theory (CDT) describes how people make sense of the complex world when they find themselves acting surprisingly or irrationally. Since its inception in 1957 by Festinger the theory has been extensively used by management researchers to help explain complex issues. In an organizational context, cognitive dissonance plays a crucial role in key decision making and judgement evaluation. Hence the study of cognitive dissonance draws attention from a wide range of management researchers. This paper provides a review of the key literature and findings in the field of management and marketing which use CDT to solve complex organizational issues.

Introduction

In 1957, Leon Festinger introduced the concept of Cognitive Dissonance Theory (CDT) within the field of social psychology. The word "Cognition" comes from the Latin root “Cognoscere," which means "to know" and is defined as the "accumulation of information that we have acquired through our perceptions of reality" (Akpan, Beard, & Notar, 2018, p.1). Cognition is a subjective perspective that varies across individuals based on their knowledge, belief, opinion, and value system. Dissonance is the lack of agreement or existence of non-fitting relations among cognitions; for example, it may be the difference between what we see and what we are told, and it is a ubiquitous but powerful tool that appears in every aspect of our daily activities and decision-making processes (Festinger, 1957). Hence cognitive dissonance is a negative affective state that results from an individual experiencing two or more contradicting thoughts, which influence the decision-making ability of individuals by altering their existing attitude, belief, or behavior (Festinger, 1957; Hinojosa, Gardner, Walker, Cogliser, & Gullifor, 2017). As a result of cognitive dissonance, individuals come under pressure to remove one of the two or more contradicting cognitions to restore consistency and to justify their action (Bem, 1967; Leod, 2018). In other words, CDT describes how people make sense of the complex world when they find themselves acting surprisingly or irrationally (Stone & Fernandez, 2008).
Cognitive Dissonance Theory

Festinger (1957) first proposed that cognitive dissonance is a common psychological phenomenon that individuals experience daily (Jackson & Hogg, 2010). CDT attempts to account for patterns of observed functional relations between current stimuli and responses by creating some hypothetical process (Bem, 1967). For example, cognitive dissonance can occur for a smoker who is trying to quit (first cognition) while lighting up another cigarette (second cognition). Consistent with the basic social norms, people often face dissonance for believing that lying is wrong (first cognition) and being forced to lie (second cognition). Due to such conflicts, politicians who propose legislation to restrict certain forms of behavior (first cognition) get caught in the future for engaging in the same practices they tried to limit (second cognition). In this context, we can argue that at least one of the cognitions is dissonant or inconsistent with one or more related cognitive elements like attitudes, values or beliefs (Jackson & Hogg, 2010).

Festinger concludes that contradictory states between cognitions create a negative drive state that motivates a desire to restore consistency. Psychological research supports this assumption by showing that when dissonance creates a phenomenologically aversive state of arousal that people interpret as psychological discomfort, it can motivate them to seek ways to reduce the discomfort (Jackson & Hogg, 2010). Festinger (1957) proposed two basic hypotheses to understand the implicit meaning of cognitive dissonance. (1) The existence of dissonance, being psychologically uncomfortable, will motivate the person to try to reduce the dissonance and achieve consonance and (2) when dissonance is present, in addition to trying to reduce it, the person will actively avoid situations and information which will likely increase the dissonance.

One of the principal and significant effects of cognitive dissonance is a change in attitude. Attitude change can be expected to be in line with the cognition that is more resistive to change because if a person behaves in a particular manner, it is often challenging to undo that behavior (Harmon-Jones, 2007). Thus, CDT is based upon a general assumption that people always attempt to appear reasonable and thus they need to ensure that their behavior is consistent with their attitude toward an event (Jermias, 2001). So, when they act in a way that is inconsistent with their opinion, they experience tension and attempt to reduce this tension. This is when people experience dissonance, the negative state that arises when a person experiencing two or more different cognitions and cognition as a broader sense includes personal beliefs, attitudes, and opinions (Festinger, 1957). It is quite interesting that Festinger uses a mathematical equation to describe dissonance. The equation states the magnitude of dissonance experienced $M = \frac{D}{D+C}$ where $D$ is the sum of experienced cognitions that are dissonant from a referent cognition, and $C$ represents the number of experienced cognitions that are consonant with the same referent cognition (as cited in Hinojosa et al., 2017). To reduce dissonance, individuals could add consonant cognition and subtract dissonant cognition, or increase the importance of consonant cognition to decrease the significance of dissonant cognition (Harmon-Jones, 2007). The core framework of CDT refers to a four-step process of dissonance arousal and reduction (Hinojosa et al., 2017).

- Cognitive discrepancy
- Dissonance
- Motivation
- Discrepancy reduction

Cognitive discrepancy occurs when an individual experience conflict between two or more cognitions as a result of cognitive discrepancy. Each possible scenario of a cognitive discrepancy is often coupled with a specific prediction that will very likely reduce discrepancy (Cooper, 2011). CDT assumes that individuals prefer cognitive consistency and any deviation to that will create an unpleasant feeling. Factors like free choice, counter-attitudinal behaviors, and effort/behavioral commitment cause cognitive discrepancy which quickly escalates to dissonance. Dissonance can be referred to as the negatively affected cognitive state and resultant feelings of discomfort as a result of cognitive discrepancy (Cooper, 2011; Harmon-Jones, 2007).
Interestingly, dissonance acts as a motivator that influences people to seek for cognitive consistency and a pleasant state (Hinojosa et al., 2017). Finally, people alter their cognitions to reduce dissonance and thus reducing the discrepancy.

The key phenomena of CDT have three main paradigms (i) forced compliance studies (ii) free choice studies and (iii) exposure to information studies (Bem, 1967; Hinojosa et al., 2017). In the forced compliance paradigm, the attitudinal changes of an individual are monitored, where the individual is forced to get engaged in some task or behavior that would influence their endorsement of a particular set of belief or attitudes. The second paradigm draws a conclusion when individuals tend to decide based on their independent and free choice. The theory suggests that individuals in this scenario may experience dissonance because of (i) unfavorable aspects of the chosen alternative or (ii) favorable aspects of the rejected alternative. To reduce the pressure to achieve cognitive stability individuals exaggerate the favorable features of the chosen alternatives and understate its unfavorable aspects (Festinger 1964; Bem, 1967). The exposure to information paradigm focusses on situations when individuals involuntarily get exposed to information that is discrepant with information they already possess. This paradigm also addresses the effect of an individual’s willingness to expose her/himself voluntarily to dissonant information (Dramel, 1962; Festinger, 1957).

In Festinger’s theory of cognitive dissonance two elements in an individual’s cognition may be irrelevant, i.e. one cognition element may imply nothing concerning the other. If two cognitive elements are related, however, they are either dissonant or consonant. Cognitive dissonance, therefore, is the existence of nonfitting relation among different cognitions (Comegys, 1976).

Figure-1

(Dissonance Importance, Magnitude and Reduction Pressure, Comegys, 1976)

From figure-1 it can be seen that, if two thought elements are dissonant with one another, the magnitude of dissonance will be a function of the importance or value of the element to the individual. Hence the greater the magnitude of dissonance the greater the pressure to reduce it (Comegys, 1976). In this context, it can be argued that minor mistakes in judgment like giving a dime to a blind person, who is later revealed as being able to see, will generate dissonance of low magnitude. The reason behind the low magnitude dissonance, in this case, can be attributed to the trifling sum of money given away by the defrauded giver, which holds less importance to the individual. But in situations where a large financial commitment is involved, as a result of judgmental mistakes, individuals may find themselves in much more demanding psychological situation with dissonance of higher magnitude. As an immediate effect, the individual may involve himself in dissonant reduction and reinforcement techniques such as avoiding unfavorable inputs or reading favorable literature to gain endorsement from his immediate surrounding (Comegys, 1976).
Cooper and Fazio (1984) proposed the aversive consequences model of CDT (also called the new look perspective). It highlights that the self is irrelevant to create dissonance, rather dissonance occurs when an individual feels personally responsible for aversive consequences. They state, “Dissonance has precious little to do with the inconsistency among cognitions per se, but rather with the production of a consequence that is unwanted” (as cited in Harmon-Jones & Harmon-Jones, 2007, p. 10). Cooper and Worcel (1970) designed an experiment to test the theory, and their results show that only when a person feels personally responsible for producing an aversive consequence, dissonance-related attitude change occurs. To look deeper into the theory and its application in management research, existing literature and previous research findings have been summarized below to study the application of CDT in Management and Marketing.

Table 1 - Cognitive Dissonance Literature in Management Studies

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<tr>
<th>Citations</th>
<th>Who experience Dissonance</th>
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<tr>
<td>(Bacharach, Bamberger &amp; Sonnenstuhl, 1996)</td>
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<td>(Hannan &amp; Freeman, 1984)</td>
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<td>(Halbesleben &amp; Buckley, 1962)</td>
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<td>(Maertz, Hassan &amp; Magnusson, 2009).</td>
<td>Expatriate</td>
<td>Adjustment in organizations</td>
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Table 2 - Cognitive Dissonance Literature in Marketing

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<tr>
<td>(Ehrlich, Guttman, Schönbach &amp; Mills, 1957)</td>
<td>New and old car owners</td>
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<td>(Engel, 1963)</td>
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Cognitive Dissonance in Management

There is a significant difference between the applicability of CDT in the field of social psychology and the field of management. In social psychology, CDT focuses primarily on the nature and type of discrepancy reduction that occurs in response to dissonance. On the other hand, some management research does not predict discrepancy reduction but instead predict negative consequences of unresolved dissonance (Kammeyer-Mueller, Simon, & Rich, 2012; Grandey, Chi & Diamond, 2013; Hinojosa et al., 2017). CDT has been adopted and used by management scholars to address various issues in the field, such as management of change. Management of change in organizations can be addressed by using the free choice paradigm of CDT.

Dissonance in Change Management

The theory states that dissonance is likely to occur after a decision, which requires a change in existing belief, attitude or behavior. If the decision is difficult, then there will be a greater motivation to reduce the dissonance (Harmon-Jones & Mills, 1999). To reduce dissonance when individuals adopt/accept a new cognition by altering one of the dissonant cognitions, they will adopt the behavioral shift only if they believe that they have the freedom to change that behavior. If the change is forced, it is more likely to create dissonance of higher magnitude (Burnes, Hakeem, & Culture, 1995). This concept can be applied in an organizational context. In the context of organizational change, since employees are influenced by various dissonance-arousing situations, it is essential to involve employees in significant decision making to ensure safe and effective execution and management of change (Burnes, Hakeem, & Culture, 1995). Organizational change can also be addressed by logics of action, which can be defined as the implicit relationship between means and ends lying beneath the specific actions, policies, and activities of the members of the organization. This may lead to both individual and group work (Bacharach, Bamberger &
Sonnenstuhl, 1996; Burnes, 1996; Telci, Maden, & Kantur, 2011). In another study, Le Mens, Hann, and Polos (2015) examine the various effects of age-related structural inertia and organizational performance by drawing theoretical reference from key CDT concepts and approaches like self-consistency theory and behavioral commitment. The authors conclude that in older organizations employees resist organizational change to avoid the introduction of new dissonance. Although actors in the institutional level may alter their logics of action immediately after an environmental change, these new logics may contradict with those held at the core level (i.e., managerial and technical). (Bacharach, Bamberger & Sonnenstuhl, 1996) To maintain their cognitive consistency, actors at the core may stick to old attitudes and behaviors at least in the short run; but over time, inconsistencies are likely to be resolved with the realignment of cognitive structures, resulting in the stable states proposed by both institutionalists and ecologists (Hannan & Freeman, 1984; DiMaggio, 1988; Telci et al., 2011).

**Cognitive Dissonance and Organizational Ethics**

CDT helps in the comprehension of various psychological processes behind resistance to change or resistance to adapt to change at various organizational levels, including alignment, misalignment or realignment stages of organizational transformation (Schwepker, 1999). Researchers in the field of management have also used CDT to study and explain the effects of business ethics judgment in an organizational context. As a characteristic attribute, employees seek a certain degree of consistency between their ethical value system and ethical elements in their organization’s work culture (Telci et al., 2011). To preserve their ethics, employees will expect support from the top management in return for their ethical behavior, an organizational environment which will support the ethical behavior of employees, and employees will expect career success as well as a result of their ethical practice in the organization. If employees for some reason feel that these expectations are not fulfilled in their organization, there will be a dissonance which will result in reduced job satisfaction. Here it can be noted that any incongruence between the ethical or moral values of the top management and employees will result in a moral controversy and cognitive dissonance, which will also deteriorate job satisfaction (Dozier & Miceli, 1985; Schwepker, 1999).

Lii (2001) looked into the forced compliance model of CDT and studied the effects of cognitive dissonance on managers after making business ethics judgment. He concluded that the degree of cognitive dissonance experienced by managers after making business ethics judgment is contingent upon (1) the nature of the judgment; (2) the magnitude of personal gain involved in the situation; and (3) manager's moral development. To study the effects, two hundred and thirty-eight managers who attended nondegree graduate management offered by universities were asked to participate in the study voluntarily by answering a questionnaire.
In the questionnaire, the participants were asked to make a business decision involving a situation of unfair competition. The unfair competition included preventing competitors by proclaiming a product benefit in an advertisement with no scientific evidence. Participants were asked whether they would engage in such a business, given that personal gains were manipulated. In one situation there was no personal gain, and in two other situations, there were NT$ 100,000.00 (high personal gain) and NT 50,000.00 (low personal gain). Each participant made the business judgment for only one situation. Participants’ moral judgment and the degree of cognitive dissonance were measured after making the decision. Results of the test were interesting (see figure:2). The study demonstrated that in a situation where low personal gains were involved, individuals with a lower degree of moral development making an unethical judgment experience a significantly higher degree of cognitive dissonance than most of the other participants (Lii, 2001). When high personal gains were involved, individuals with a lower degree of moral development making an ethical decision experience significantly higher degree of cognitive dissonance than others.

Further, the researchers also found that cognitive dissonance for participants with a higher degree of moral development making unethical judgments in a high personal gain situation is significantly higher than that of the participants with a lower degree of moral development making ethical judgments in a low personal gain situation (Lii, 2001). Hence, moral development of an individual may also influence the level of dissonance experienced before and after an ethical decision. Managers may have to make decisions for the benefit of the organization, where those decisions may conflict with their personal values (Lii, 2001).

**CDT and Entrepreneurial Behavior**

Examining the role of cognitive dissonance in studying entrepreneurial behavior is another area of study in the field of management research. Comegys (1976) studied the effects of cognitive dissonance on entrepreneurial behavior and concluded that entrepreneurs make substantial psychological and financial investments in terms of time, money and effort to realize an idea. The authors argue that once the entrepreneur has the idea, they then proceed to gather information and conduct research as to its feasibility.
At some stage in the entrepreneurial process, the individual becomes highly committed, which may be a psychological effect before making a financial investment.

Figure: 3

(Entrepreneurial Process Continuum, Comegys, 1976)

Generally, the more the psychological commitment, the more difficult it is for the entrepreneur to undo their action or turn back on their decision making. In order to realize an idea, the entrepreneur may become over committed to it and lose their objectivity, while at the same time raising questions about the feasibility of their investment decision. Two basic criteria are necessary for this super committed stage, which can also be termed as the point of no return: (i) the belief must have held with deep conviction, and it must have some relevance to action to what the believer does or how they behave; (ii) the person holding the belief must have committed themselves for the sake of their belief, and they must have taken some very important decision to realize their idea that is difficult to withdraw. The author points out that cognitive dissonance, in this case, triggers this loss of objectivity, which when appearing at the early stages of entrepreneurship, will create risk for the entrepreneur which should be taken care of by the objectivity of outside advisors (Comegys, 1976).

In the field of entrepreneurship research, Ambos and Birkinshaw (2010) used the concept of collective cognitive dissonance as a basis to study the evolution and transition of new ventures. The authors define two different changes in new ventures: incremental change and radical change. While incremental change refers to minor changes to create greater coherence between the elements of the archetypes, the latter occurs when organizational leaders discard an old interpretive scheme and are supplanted with a new one. To get a holistic perspective on new venture evolution, the authors used the theoretical lens of “archetypes” which provides rich insights into the multiple contributory factors that shape the evolutionary process of new ventures and inter-archetype transitions triggered by the collective cognitive dissonance of the venture leaders which can be resolved by internal negotiation. Here, by the term collective “cognitive dissonance” of the venture leaders, the authors referred to the gap between their old interpretive scheme and the emerging reality for the venture.

CDT in Information Systems Management

Along with the discussion of the evolution of CDT over the past decades, it is interesting to understand how the theory is being used in the general management literature. In the IS domain, the theory is mostly used to explain the adoption and continuance use of any technology. For example, Bhattacherjee, (2001) uses CDT to explain the continuance use of new technology by the users. He argues that users experience cognitive dissonance when their pre-acceptance usefulness perceptions of new technology are disconfirmed during actual use. So, to resolve dissonance rational users may modify their usefulness perceptions in order to be more consistent with reality. A similar argument is also made to explain information technology adoption behavior which suggests that as individuals tend to seek consistency among their cognitions, a discrepancy between perceived performance and expectations of a technology use, will most likely lead to a change in expectations to accommodate the perception (Liao, Palvia, & Chen, 2009). Studies also
show that active participation of employees in IS project development influences their attitude towards using the developed systems because as per CDT individuals hold attitudes that are consistent with their actions (Bassellier, Reich, & Benbasat, 2001).

CDT in Management Strategy

Apart from IS, CDT is also theorized in various strategy literature. Using a survey sample of 803 participants (top executives and fund managers in the USA), a study shows that executives use interpersonal influence to prevent institutional investors from using their power to change strategies which could benefit shareholders at the expense of top management (Westphal & Bednar, 2008). Investors experience cognitive dissonance when their actions create conflicts with the CEOs' preferences. Fong et al. (2010) studied the effect of CEO pay discrimination and overall firm performance from a CDT perspective. Drawing on the theories of organizational approaches to fairness, the authors suggested that CEOs whose pay deviates from the labor market are more likely to generate cognitive discrepancy. As a result they should be motivated to reduce the dissonance by (i) increasing their outcomes in terms of rewards (ii) altering their situation either materially (i.e withdrawal from the firm) or cognitively (i.e rationalization) or (iii) reducing their effort (Greenberg, 1990; Greenberg, 1989; Fong et al., 2010).

Dissonance, Behavioral Intention, and Work Attitude

Behavioral intention and work attitude in an organizational context can also be addressed using CDT (Doran, Stone, Brief & George, 1991). Doran et al. (1991) concluded that behavioral intentions might be a cause as well as a consequence of attitudes and intentions which may have a significant association with subsequent satisfaction. The authors argued that employees entering an organization with higher intention to quit will subsequently report lower levels of job satisfaction than individuals entering the organization with an intention to stay, because they want consistency in cognition about their attitudes, i.e., behavior and behavioral intention. The free choice paradigm of CDT can explain the relationship between the intent to quit and job satisfaction when employee economic choices are higher (Brehm & Cohen, 1962). In this context, it can be argued that the pressure for cognitive consistency is higher when personal perception of choice is higher than when it is low (Brehm & Cohen, 1962).

CDT in Organizational Behavior

In addition to the above studies, attempts of dissonance reduction in the field of organizational behavior is also evident from previous scholarly work. Halbesleben & Buckley (1962) explained the manager's self-perception of their personal values to a misperceived social standard, which creates dissonance and affects their organizational outcome. Sronce & McKinley (2006) studied the role of cognitive dissonance in affecting individual perception of organizational downsizing. They describe that individuals with past organizational layoff experience perceive downsizing as inevitable and less of a breach of employment contract than those individuals with out any prior layoff experience, due to their dissonance reduction attempt. Maertz, Hassan & Magnusson (2009) studied the behaviors of expatriates using the self affirmation model of CDT and concluded that rationalization helps expatriates reduce their cognitive dissonance resulting from accepting or rejecting culturally acceptable behavior that is divergent from their own belief, values or attitudes (Maertz, Hassan & Magnusson, 2009).

Cognitive Dissonance in Marketing

Since its origin, CDT has been widely adopted into marketing literature. The theory is mostly used to explain consumer behavior, focusing on the dilemmas faced during various stages of purchasing behavior. Festinger’s definition of cognitive dissonance argue for three types of dissonance arousal, (i) dissonance
may be aroused after making an important and difficult decision; (ii) after being forced to say or do something which is contrary to private attitude, belief or opinion; and, (iii) after being exposed to discrepant information. However, instead of suggesting the different modes of dissonance reduction, CDT proposes possible ways to reduce dissonance, which may include attitude change, opinion change, seeking and adapting consonant information, avoidance of dissonant information, perpetual distortion and behavior change (Oshikawa, 1969). In the paragraphs below an extensive review of marketing literature, that uses CDT, is provided.

In some of the early studies, researchers explore dissonance during post-purchasing behavior. For example, studies explore the impacts of advertisements on customers’ dissonance after purchasing their preferred automobile (Ehrlich, Guttman, Schönbach, & Mills, 1957; Engel, 1963). The empirical study by Ehrlich et al. (1957) demonstrates that new car buyers read advertisements featuring their own car more often compared to other cars they considered before buying the new car. They highlight it as "the selective tendencies in readership" that helped them to get more information (as advertisements discuss only material favoring the featuring cars) about their own cars and reduce dissonance. Engel (1963) also explores the similar phenomena by interviewing 88 owners of Chevrolet owners to study the impacts of advertisement. He also finds similar results where attention to advertisements does not induce dissonance among the vehicle owners.

Integrating the original classification of consumer goods, i.e., convenience, shopping, and specialty goods with dissonance theory, Kaish (1967) provides a new and broadened definition to the existing classification. According to American Marketing Association, “Convenience goods are those consumers’ goods which the consumer usually purchases frequently, immediately, and with a minimum of effort; shopping goods are those consumers’ goods which the consumer in the process of selection and purchase characteristically compares on such bases as suitability, quality, price, and style; and specialty goods are those consumers’ goods on which a significant group of buyers is habitually willing to make a special purchasing effort” (p. 28). However, Kaish (1967) argues that there exist several issues with these definitions such as there is no clear distinction between shopping goods and specialty goods. Secondly, these definitions do not explicitly focus on mental and physical efforts required to buy consumer goods. Thus, based on dissonance theory, he explains dissonance can occur in personal consumption situations as well as there is post-decisional dissonance. He suggests that factors like importance of a good, its functional differences from other goods, buyers' perception of the goods, and depth of assortments available influence the level of dissonance during purchasing of consumer goods. Based on these factors, he broadens the existing definitions of convenience, shopping, and specialty goods by considering their potentials to cause dissonance among the buyers.

Data Privacy in Marketing and Cognitive Dissonance

Service providers, by gaining widespread access to a consumer’s personal information, can have unwanted effects like unwanted marketing communication, highly targeted and obtrusive marketing communication, privacy invasion and vulnerability to fraud, which all affect the regular lives of consumers (Martin & Murphy, 2017). Organized and scientific use of data by the service providers has significant marketing usage such as personalized product offerings and recommendations, free services, price discounts, and more media content with direct relevance to consumer interest, which can be transcribed from the user data generated by the consumers (Martin & Murphy, 2017). From a marketer's perspective, it can be argued that gaining access to user's personal information helps the service providers to operate more efficiently with better information. Research in this context demonstrates that marketing practices using consumer data has evolved rapidly and become the central to businesses. The research questions in this context shifted from whether consumers are willing to disclose their private information to how consumers react to who has access and control over their data (Martin & Murphy, 2017). On the issue of privacy, a respondent from a survey conducted by Pew research commented that "I share data every time I leave the house, whether I want to or not. The data isn't [sic] really the problem. It's who gets to see and use that data that creates
problems. It's too late to put that genie back in the bottle" (Rainie and Duggan 2016, p. 9). While people are keen to take advantages of the reward associated with various web-based application like social networking, e-commerce, location search, online dating and many more they also express concern about information about their identity being disclosed. Evidence from various sources and media articles indicate that people are willing to trade or share their personal information for relatively small rewards (Hann, Hui, Lee, & Png, 2007). This imbalance between expressed interest in internet usage and demonstrated concern about privacy has been termed as a privacy paradox (Ghosh & Singh, 2017) which is a direct result of cognitive dissonance.

Cognitive Dissonance in Consumer Behavior

Oshikawa in his 1969 article, criticizes the application of CDT in explaining consumer behavior mostly focusing on post-purchasing dissonance. While most of the previous studies used experimental research designs to explain dissonance in purchasing behavior (Ehrlich et al., 1957; Engel, 1963), Oshikawa (1969) points out various issues in such research designs such as built-in bias, etc. Further, he explains that the findings of these experiments are not unequivocal in support of dissonance theory. Thus, he concludes that in most instances, the theory is not adequate to explain consumer behavior before a purchase decision. In their literature review of usage of CDT in consumer behavior research, Cummings and Venkatesan (1976) also discuss various conceptual and empirical limitations of the theory in this context. Firstly, they highlight the issues related to the measurement of the magnitude of the dissonance. According to them, the existing scale is highly correlated to the measurement of general confidence and anxiety; hence the results obtained from using this scale are questionable. Secondly, they recommend the usage of appropriate correction to the regression artifacts used in CDT. Thirdly, they question the prerequisite conditions for producing dissonance among consumers. They argue that in consumer research while researchers follow experimental designs, they often fail to meet various pre-requisite conditions such as voluntary decision to buy a product, irrevocable commitment to the decision, etc. Fourthly, in experimental studies, researchers also fail to shield the participants against alternative modes of dissonance reduction. Fifthly, in consumer research, various studies manipulated different variables that are not related to the CDT. Finally, Cummings and Venkatesan (1976) highlight that there exist various alternate explanations to the studies that use CDT to explain consumer behavior. These alternate explanations essentially minimize the compelling evidence of the theory in consumer research. In conclusion, they provide various recommendations and future research directions to effectively incorporate CDT in consumer research literature.

Post Decision Dissonance in Marketing

Festinger's Theory of cognitive dissonance involves decision making as one of the main phenomena where the effect of cognitive dissonance is highly significant, because decision making involves choosing alternatives and the person involved in decision making has to cope with the cognitive elements of the attractive attributes of the rejected cognitions. Since the process of decision making involves the rejection of alternatives, post decision-making dissonance is an inevitable consequence of decision making. The magnitude of dissonance is highly influenced by the importance of the decision and the relative attractiveness of the rejected alternatives. Hence the more important the decision and the more attractive the rejected alternative(s), the greater the dissonance. One attribute of Festinger's theory suggests that the greater the number of alternatives a consumer considers before purchase the more is the dissonance.

In addition to the above argument, we can find many articles in consumer research that use CDT. For example, Hunt (1970) uses CDT to explain the importance of post-transaction communications from retailers that help reduce dissonance among new buyers and thus helpful in creating a long-term relationship between the buyer and retailers. He uses experimental design with two experimental groups and one control group to study the impacts of communications from retailers and the relative effectiveness of different types of communications towards consumers to reduce dissonance. The results show that customers who receive
post-transaction letters from retailers are likely to have less dissonance while having a more favorable attitude towards the store and high repurchase intentions. Interestingly, telephone calls from retailers produce negative impacts with customers feeling more dissonance and fewer repurchase intentions.

Product Innovation and Cognitive Dissonance

Few studies explore cognitive dissonance among innovators during various stages of product diffusion. For example, Connole, Benson, and Khera (1977) explore innovators’ dissonance subsequent to the purchase of a product that has attributes significantly different from those of established brands. Following an experimental design in a context of new automobiles, the results show that innovators sought consonant information to a much greater extent than did the non-innovators. Thus, innovators feel more dissonance than that of non-innovators. They further discuss the practical implications of such a study by highlighting that adoption of a new product is largely dependent on the willingness of the innovators to adopt the product. Hence, marketers of new products should realize that their post-purchase communication responsibilities are substantially different toward innovators as opposed to that of non-innovators. In another study, researchers investigate the impacts of cognitive dissonance, expectations, and product performance on product evaluation (Korgaonkar & Moschis, 1982). The authors argue that for high involvement products pre-purchase expectations lead to more favorable post-purchase evaluations due to less dissonance. The results of their 2x2x2 factorial design suggest product involvement acts as a moderator in the post-decisional product evaluation process.

Dissonance Measurement in Consumer Research

As discussed earlier, one of the measure criticisms for CDT in consumer research is the issues related to measuring dissonance (Oshikawa, 1969; Cummings & Venkatesan, 1976). Consistent with this issue; several researchers propose to modify the existing scales and construct a new scale. For example, Oliver (1997) argues that as the area of consumer research is different from that psychology in which the concept of dissonance was first developed, a new scale must be developed to measure dissonance in the consumer research area. In 2000, Sweeney, Hausknecht, and Soutar developed a multidimensional scale to measure cognitive dissonance in purchase behavior. They argue that there exist distinct cognitive and emotional aspects of cognitive dissonance and hence a multidimensional scaling is required to measure both these aspects. Following the scale development approach proposed by Churchill (1979), Sweeney et al. (2000) first developed the initial set of 100 items from four exploratory focus group discussions with consumers. Secondly, the content validity of these items was assessed by twelve consumer behavior experts and 36 items were retained for each of the cognitive and emotional components (total 72 items). Using a student sample of 455 students, responses were collected for these 72 items. Exploratory and confirmatory factor analysis, content validity, and reliability of these items were conducted, and a 28-item scale was finalized for reexamination with the use of an independent and more diverse second data set. For this re-examination, data were collected from real customers, and the validity and reliability of these 28 items were measured. Finally, the multidimensional scale was developed with 22 items in total with three different dimensions, i.e., "emotional," "wisdom of purchase," and "concern over deal" with 15 items, 4 items, and 3 items respectively. The emotional dimension is defined as "a person's psychological discomfort subsequent to the purchase decision", wisdom of purchase is "a person's recognition after the purchase has been made that they may not have needed the product or may not have selected the appropriate one", and concern over deal is "a person's recognition after the purchase has been made that they may have been influenced against their own beliefs by sales staff" (p. 380). They conclude that this multidimensional scale can be used explicitly to measure dissonance in various stages of purchasing such as decision-making process before buying a product to the time of repeating the purchase of the same product. Soutar and Sweeney (2003) extend this scale development research to examine the presence of dissonance segments. Using k-means cluster analysis, they try to understand the level and pattern of cognitive dissonance in two different customer groups. The results show three different dissonance segments in consumer goods markets, i.e., high-
dissonance, low-dissonance, and concerned-about needing the purchase. It shows younger customers and customers who do not feel confident to evaluate product quality are more likely to experience dissonance. Hence, managers need to focus more on these groups and must train the sale-persons to deal with these segments effectively. Interestingly, sales staff increase customers' dissonance, particularly in the ‘concern over the deal’ dimension as it is based on a sense of being persuaded against one’s own will to buy a product. Managers need to be aware of the pivotal role that sales staff play and ensure that they are supported in dissonance reducing tactics.

Discussion

From the literature discussed above, it is evident that the theory of cognitive dissonance has been extensively used by management scholars to explain organizational phenomena like employee attitude and behavior in the process of organizational change and to describe the psychological reasons of moral conflict during the change. In the field of entrepreneurship, the theory has helped researchers in studying and explaining managerial and entrepreneurial behavior by clarifying the primary reason behind individual attempts to increase consistency in decision making. CDT can also be extended to study organizational issues such as organizational justice, managerial and employee decision making, adaptation process of new employees or minorities in an organization, maintenance of group harmony and deviant employee behavior. Its use in the management context helped it to improve its generalizability across different domains. The theory has contributed to the existing knowledge by providing a base for logical explanations of various management discrepancies. One of the major applications of CDT is in the area of change management in a different organizational context, where the theory has been used extensively to study and understand factors that encourage or impede successful change. Employee involvement evolved as one of the main factors which can be used to reduce the dissonance involved with different parties in an organization. The theory also helps to explain the psychological process behind resistance to change at different levels of an organization during alignment, misalignment and realignment stages of transformation. The implications of the theory can be elaborated by looking into the role of human resources in possible dissonance reduction in transformed organizations.

The paper also discussed the role of moral conflict in organizational well being, as researchers perceive these conflicts as basic precursors of managerial discontent and employee dissatisfaction. CDT in this context can be used to understand the psychological reasons behind these moral conflicts and equip managers with tools to understand and reduce the conflicts. However, change management is an area which can be even more explored by using CDT. This is an attractive avenue for future research. In the organizational behavior domain in the field of management research, conflict between entrepreneurial behavior, behavioral intention and work attitude of employees have also been studied by management scholars extensively. Researchers made use of CDT as an explanatory mechanism to explain intention-behavior relationship rather than making any contribution to the theory itself. CDT gained attention from marketing researchers a few years after its inception by Festinger in 1957. The theory has been extended to explain various obvious phenomenon in the field of marketing such as consumer behavior in the post-purchase situation. A large number of studies were conducted to test how cognitive dissonance can explain consumer behavior. Researchers get mixed results from the studies; however, support for the theory was greater. Use of the theory in the field of management research has faced a significant decline because of the difficulty in measuring marketing constructs and dissonance in consumer behavior operationally. However, a scale developed by Sweeney et al. (2000) may ease the study of the theory.

Like any other management theory, CDT also exerts some boundary conditions "which help scholars assess the practicality, usefulness, and generalizability of the theory. The boundary conditions set the limitations in applying the theory" (Bacharach, 1989, p. 498). Evaluation of the boundary conditions concludes the potential applicability of a theory to provide unique predictions beyond other theories in a similar field. Hinojosa et al. (2017) discuss the boundary conditions associated with CDT with three basic assumptions:
(i) value assumptions; (ii) temporal assumptions; and, (iii) spatial assumptions. Value assumptions help in providing an implicit foundation for theories and help in understanding the theory through historical analysis and development of the theory. Value assumptions associated with CDT are similar to other theories of cognitive consistency in social psychology that individuals are driven to maintain cognitive consistency (Hinojosa et al., 2017). Temporal assumptions refer to the historical and future applicability of the theory (Bacharach, 1989). This assumption suggests that individuals will have fundamentally different responses to cognitive discrepancy when compared to a different timeframe in the past, and the future as well. Spatial assumptions refer to the units and levels of analysis to which the theory applies (Bacharach, 1989). Early development of CDT focused on the individual level of analysis, limiting its boundary conditions. In current management research, the scope of CDT in analyzing organizational issues can be applied to multi-level and between-person research designs and analysis (Harmon-Jones, 2007).

**Conclusion**

Application of CDT across management and marketing research domains is extensive and expanding at a steady pace. As CDT can be paired with other management theories due to its broad range of applicability, Hinojosa et al. (2017) recommend a three-course plan of general, methodological and theoretical recommendations to look into for further research in CDT. The exploration of the temporal assumption of CDT and its applicability in an organizational context constitutes a meaningful paradigm for further research. A wide range of management disciplines can benefit from examining the temporal nature of cognitive discrepancy and the dissonance process. Study of topics like emotional labor, consumer behavior and digital privacy from a CDT perspective may be interesting topics of further research. Previous marketing research based on CDT has tried to focus mostly on consumer behavior and post-purchase dissonance. More scope for future research lies with phenomena involving decision making and market entry strategy from a marketer’s perspective. Finally, in a marketing context, the three main paradigms of the theory such as forced compliance studies, free choice studies and exposure to information studies can be used extensively to study product innovation and market entry strategy of organizations. One of the main agendas of this paper is to comprehend previous research work involving CDT in the fields of management and marketing. The paper also explores future avenues for research that can make significant contributions on the already existing literature of CDT in the management domain.
References


Burnes, B. (1996). No such thing as... a “one best way” to manage organizational change. *Management decision, 34*(10), 11-18.


