THE INFLUENCE OF THINKING STYLE AND MENTAL CONSTRUAL ON CONSISTENCY OF CONSUMER PREFERENCES

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Dissertation Abstract

Aslı Elif Aydın, “The Influence of Thinking Style and Mental Construal on Consistency of Consumer Preferences”

The objective of this dissertation is to investigate the role of two cognitive theories, namely dual process theory and construal level theory in influencing consumers’ evaluative processes and their consistency. For this purpose two experimental studies are conducted.

The first study investigates the relationship between use of the experiential-rational systems and preference consistency. Findings demonstrate that affective stimuli induce more consistent preferences than analytical stimuli. Furthermore, it is shown that processing fluency is enhanced with the usage of experiential thinking and affective format compared to rational thinking and analytical format. Additionally, it is also shown that consistency of evaluations across consumers is improved when they relied on the rational system rather than the experiential system.

The second study examines the relationship between mental construal level and preference consistency. Findings of this study reveal that when consumers adopt a high-level mental construal their evaluations become more consistent. Moreover, it is also shown that having matching high-level mental construals at two points in time rather than non-matching construals increases consistency of evaluations.

Tez Özeti

Aslı Elif Aydın, “ Düşünce Stili ve Zihinsel Temsil Yaklaşımının Tüketicilerin Tercih Tutarlılığına Etkisi”

Bu çalışma ikili işlem teorisi ve zihinsel temsil teorisi adları verilen bilişsel teorilerin tüketicilerin değerlendirme süreçleri ve tutarlılıklarını etkilemedeki rollerini incelemektedir. Bu amaçla iki deneysel çalışma gerçekleştirilmiştir.

İlk çalışma yaşantısal - rasyonel sistemlerin kullanımı ile tercihlerin tutarlılığı arasındaki ilişkiyi incelemiştir. Sonuçlar sezgisel uyaranların analitik uyaranlara göre daha tutarlı tercihlere sebep olduğunu göstermiştir. Buna ek olarak, yaşantısal düşünce stili ve sezgisel formatların, rasyonel düşünce ve analitik formatlara göre bilgi işleme akıcılığını arttırdığı görülmüştür. Ayrıca, rasyonel sistemlere dayanarak yapılan değerlendirmelerde tüketicilerin yaşantısal sisteme dayanılarak yapılanlara göre daha fazla fikir birliğine vardıkları görülmüştür.

İkinci çalışma zihinsel temsil yaklaşımı ve tercih tutarlılığı arasındaki ilişkiyi incelemektedir. Bu çalışmada elde edilen bulgular, tüketicilerin soyut bir temsil yaklaşımını benimsediklerinde, somut yaklaşıma göre daha tutarlı tercihler yaptıklarını göstermiştir. Ayrıca, iki değerlendirme arasındaki tutarlılığın, birbirine benzer soyut yaklaşımlar uygulandığında birbirinden farklı (soyut ve somut) temsil yaklaşımları uygulamaya göre yükseldiği görülmüştür.

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INTRODUCTION

Preference consistency is a principal assumption of marketing. Both consumers and marketing practitioners presume consistency and stability of preferences. From the consumers' point of view, it is important to know that preferences will not change rapidly and one can enjoy an item for a long while. On the other hand, from marketing practitioners' perspective it is equally important to be able to rely on the consistency of consumers' preference since strategic marketing activities such as segmentation, targeting and positioning require some regularity and steadiness of preferences to be able to address them properly.

Prior research supports the notion that consumers are motivated to be consistent (Fichbach, Ratner, & Zhang, 2011). Numerous theories related to consistency of attitudes and behaviors are developed within psychology literature. For instance, balance theory proposes that a state of psychological balance is achieved when attitudes toward people and things in environment are formed in a coherent manner (Heider, 1946). If one set of attitudes is in conflict with another, individuals are motivated to restore balance by changing attitude toward one of the elements. Analogous to that the basic principle of cognitive dissonance theory suggests that when people have believes and values that are in conflict with each other, they try to attain harmony by following some dissonance reduction strategies (Festinger, 1957).

Consumers' drive for consistency is well documented within marketing literature as well. For instance, foot-in-the-door technique, which involves getting a person accept a large request by having them accept an initial small request, is established based on people's desire to appear consistent in their behavior (Freedman

& Fraser, 1966). Moreover, studies focusing on loyalty demonstrated that consumers want to manifest stable prefences and have consistent behavior towards favored brands (e.g. Oliver, 1999). Nonetheless, even the definition of loyalty, which is repurchasing a preferred item consistently despite numerous factors likely to cause behavioral shifts (Oliver 1997), suggests that consistency is hard to achieve. Even when consumers are satisfied with a previous choice, they fail to be consistent due to numerous factors. This dissertation attempts to shed light on some of these factors causing inconsistency.

For this purpose the present study examines the influence of two distinctive theories related to cognitive processes on preference consistency. One of the main objectives of the present study is to expand the literature on preference consistency by contributing to the research strand that investigates the influence of dual system theory of thinking styles on consistency. In addition to that the impact of construal level theory on preference consistency will be investigated.

Conceptual Background on Consumer Preferences

Individuals' preferences have been studied in various domains starting from economics in its early developments. Economic utility theory posited that preferences are stable and suggested that consistency of preferences constitutes the basic premise of rationality. Following that, behavioral decision researchers questioned the stable nature of preferences extensively. Bettman, Luce, and Payne (1998) suggested that preferences are fundamentally constructive and generally they are created whenever consumers faced a decision problem. Contrary to that Simonson (2008) argued that the degree of the sensitivity of preferences is

exaggerated. He introduced the concept of inherent preference, which is defined as a disposition to like some objects and dislike others. He proposed that people have some inherent preferences for specific objects and these preferences are stable. However for novel stimuli preferences are constructed for every decision. From a similar standpoint it was argued that people have certain tendencies towards target objects that are shaped by their experiences, needs, and values, yet preferences are not direct outcomes of these tendencies and they are influenced by various factors (Kivetz, Ntzer, & Schrift, 2008). Later on, Bettman, Luce, and Payne (2008) argued that construction process is not in conflict with stable preference rather it was claimed that as a result of such processes stable preferences are generated. Nevertheless, it is now mostly accepted that preferences are influenced by numerous characteristics of the decision problem.

A number of studies demonstrated that construction of preferences is contingent on factors related to the decision processes (Lichtenstein & Slovic, 2006). Prior research on the construction of preferences has identified several categories of factors influencing preferences, namely decision task characteristics, choice context and characteristics of the decision maker (Payne, Bettman, & Johnson,1992; Dhar, 1997).

Task characteristics relate to the features of the choice problem that are not related to the values of the options. Numerous studies addressed the preference construction processes that are produced by task characteristics. Bagchi and Davis (2012) found that order of presentation of attribute information significantly alters product assessments. It was illustrated that when making calculations is difficult, the first piece of information becomes prominent in evaluations, altering preferences. In contrast, Kardes and Sanbonmatsu (1993) demonstrated that in a sequential

evaluation task, initial alternatives are forgotten easily and final alternatives are brought into focus, hence preferred more.

Information display format is another task characteristic that influences preferences. Presenting information in list-by-attribute format as opposed to list-by-alternatives format increases preferences for the option in the middle (Chang & Liu, 2008). Moreover, displaying information in the form of numbers versus in the form of words has an effect on preferences as well (Kleinmuntz & Schkade, 1993).

The works contemplating on response mode constitute a significant part of research in this area. The impact of response mode on preferences is explained with compatibility hypothesis (Slovic, 1995). According to that the weights given to attributes varies in relation to the response mode, hence preferences might differ for choice versus matching tasks (Tversky, Sattath, & Slovic, 1988).

Another factor that has an impact on preferences is the direction in which the choices are compared. According to the feature-matching model proposed by Tversky (1977), the direction of comparison influences the extent of perceived similarity. When the extent of similarity between two objects is assessed, the attributes of the focal object are depicted on the referent. Consequently, the unique attributes of the focal object have a more significant function in judgment compared to those of the referent. Several studies have demonstrated the presence of direction of comparison effect in preference construction (Houston et al. 1989, Dhar & Simonson 1992, Mantel & Kardes 1999, Dhar, Nowlis, & Sherman, 1999).

Choice context factors, on the other hand, relate to factors that influence choice through the relative values of alternatives in the choice set. It is stated that preferences are a combination of the true preference for a target object and the impact of irrelevant contextual factors (Carlson & Bond, 2006). In an exemplar

study, comparable attributes such as price, received greater weight in comparison task, while attributes that are difficult to compare but valuable on their own such as brand name, received greater weight in separate evaluations (Nowlis & Simonson, 1997). Likewise, Hsee and Leclerc (1998) corroborated that the assessment rating of an appealing product increased with separate evaluation whereas the assessment rating of an unappealing product increased with joint evaluation.

Furthermore, attractiveness of options in assortments is another contextual factor that has an influence on preferences. It is revealed that preferences of large assortment retailers are reduced compared to small assortment retailers when the alternatives within the assortment are more attractive (Chernev & Hamilton, 2009). In a similar fashion, it is shown that preferences for a contagious group, in which alternatives are presented in a similar, close manner, increases when alternatives from different groups have equal chances of a gain. On the other hand, when alternatives have equal chances of a loss, preferences for alternatives from less contagious group increase (Mishra, 2009).

Another choice context factor is the valence of unique and common attributes in a choice set. It is suggested that features common to all alternatives in a choice set are disregarded in evaluations and unique features are emphasized (Houston & Sherman, 1995). Based on that, changing the alternatives in a choice set might alter perceptions of uniqueness; ergo the preferences (Houston & Sherman, 1995; Dhar & Sherman, 1996). Further, it is proposed that the nature of the evaluation task, as either similarity comparisons or comparisons searching for divergence, changes the importance of common and unique features and shifts relative preferences (Dhar, Nowlis, & Sherman, 1999).

Based on the context effects, a variety of heuristic strategies that influence preferences are put forward. For instance, compromise effect is defined as preference for alternatives with average attribute values over alternatives with extreme values (Dhar, Nowlis, & Sherman, 2000). Attraction effect refers to shift of preferences towards one alternative when the other alternative is dominated by an irrelevant option entered to choice set (Amir & Levav, 2008). Another example of context effects is the trade-off contrast (Simonson & Tversky, 1992). It is shown that the choice between two alternatives is affected by the comparisons made between the trade-offs that are made among features of the alternatives and trade-offs that are made between alternatives outside of the consideration set.

The third factor influencing preferences is the characteristics of the decision maker. Studies examining decision maker's characteristics found out a strong influence of individual differences on preference construction process. Bettman, Luce, and Payne (1998) demonstrated the impact of goals of the decision maker on preferences. The main strategic goals of decision maker were listed as maximizing accuracy of decisions, minimizing cognitive effort, maximizing ease of justification of the decision, and minimizing negative affect. It was shown that degree of attention paid to a decision problem, perceptual interpretation of the elements of the problem and the strategies and heuristics employed to reach a decision are all influenced by the weight that decision makers give to these goals.

A number of personality variables moderate the influence of task and context factors on preferences. For instance, decision maker's degree of familiarity with product category intensifies preference reversals between different response modes (Coupey et al. 1998). Related to that Mantel and Kardes (1999) illustrated that high involvement reduces preference reversals caused by task factors. Furthermore,

several studies examined the significance of learning and experience in preference construction and establishing stable preferences (Wedell & Bockenholt, 1990; Kim, Kardes, & Herr, 1991; Hoeffler & Ariely, 1999, Amir & Levav, 2008).

Given that the preferences are sensitive to the impact of various factors of evaluation, it is important to understand cognitive processes that impair or enhance consistency. It is also essential to look for methods that will enable consumers to achieve more consistent preferences. It is the objective of this dissertation to understand the nature of such processes and their impact on consistency.

Within this dissertation two experimental studies examining the role of two cognitive theories in influencing preference consistency will be conducted. The first study will investigate the relationship between use of the experiential-rational systems and preference consistency. Moreover, the impact of the task format and the congruency between processing style and task format on preference consistency will be investigated. In addition to consistency within individuals, the influence of thinking style and task format on consistency of evaluations across individuals will be inspected. Furthermore, processing fluency, choice confidence, and purchase intention will be analyzed regarding the effects of the experimental factors.

In the second part, construal level theory will be tested for its association with preference consistency. Initially, the effect of consumers' mental construal level on the extent of their consistency in evaluations will be tested. Following that the impact of having matching versus non-matching mental construals at two points in time on the consistency of evaluations will be examined. Additionally, the relationship between fluency, choice confidence, and purchase intention and the effect of the manipulations on these constructs will be explored as well.

It is the utmost intention of this dissertation to grasp the role of these two cognitive theories in influencing consumers' evaluative consistency and provide essential theoretical implications for consistency related literature. What's more, the present study will confidently present practical implications that will be useful for both the consumers and the marketing practitioners.

PART 1. IMPACT OF THINKING STYLE AND TASK FORMAT ON CONSISTENCY OF PREFERENCES

CHAPTER 1

INTRODUCTION

Consumers adopt different processing styles in a multitude of conditions. It is suggested that nature of task, disposition, ability and motivation influence which thinking style consumers adopt when faced with a decision problem (Novak & Hoffman, 2009). Dual processing theories categorizes two systems of thinking styles, experiential and rational thinking style (Epstein, 1994). The experiential system is affective. It is automatic and processes information intuitively, in an effortless manner. The rational system, on the other hand, is analytic. Information processing is made in a deliberative, controlled way. Since these two systems operate in completely distinct ways, their performances and the preferences that are constructed as a result of these processes differ as well.

In this research study, the impact of thinking style on consistency of consumer preferences will be examined. Moreover, the effect of the task format, which steers the type of thinking, on preferences will be investigated. It is proposed that experiential thinking style and affective task format induces more consistent preferences than rational thinking style and analytical task format. Additionally, it is expected that congruency between thinking style and task format will produce more consistent preferences relative to incongruency. Apart from the impact of thinking style and task format on consistency within individuals, their impact on interpersonal agreements, in other words, level of consensus of preferences among individuals will

be explored. Last but not least the relationship between experimental manipulations and fluency, choice confidence, and purchase intention will be scrutinized.

The remainder of this part is organized as follows. In the next section, a review of previous research on dual system theories is made. Following that, hypotheses that will be tested in this study are generated. Then the experimental research that is conducted is described and the analysis and findings are reported. In the final section, a discussion of the findings, their implications, and suggestions for future research are presented.

CHAPTER 2

LITERATURE REVIEW

Dual System Theory

Prior studies have determined that people have two independent systems that operate for reasoning, judgment and decision making processes. These two cognitive systems generally operate in a parallel and interactive manner (Epstein 2003). Therefore, the dual system model is mainly treated as a continuum rather than a dichotomy. Each cognitive activity can be placed on a location between rational/analytical/conscious pole and experiential/emotional/unconscious pole on the cognitive continuum (Hammond, Hamm, Grassia, & Pearson, 1987). Towards the rational/analytical/conscious pole cognitive activities are more logical, rule-based and effortful, whereas towards the experiential/emotional/unconscious pole they are more associative, intuitive and effortless (Sloman 1996; Kahneman & Frederick, 2002).

In order to analyze the roles and characteristics of affect, intuition, and reason in decision making a great number of scholars put forward varying dual system models (See Table 1 for the list of models). For instance, Tversky and Kahneman (1983) studied cognition to understand the roots of irrational thinking. They argued that people have intuitive and extensional reasoning mechanisms. When faced with a problem/ decision, they generally employ cognitive short cuts intuitively which easily result in oversights and shortcomings. At that point extensional reasoning takes part by controlling the intuitive responses and correcting them if necessary. Evans (1996) also proposed a model incorporating heuristics yet with a different

interpretation. He stated that heuristics enable cognitive processes to sort out suitable patterns to problems at hand rather than providing shortcuts while analytic systems are claimed to work on these selected patterns to make assessments and decisions (Osman, 2004). Similarly, Stanovich &West (2000) developed a model with two separate reasoning systems. System 1 is defined as automatic cognitive operations that employ heuristics and easily influenced by situational factors whereas system 2 is described as calculated cognitive operations that are not influenced by the circumstances.

Table1. List of Dual System Theories

Author(s)	*Dual System Theory*
Dijksterhuis (2004)	Conscious vs. unconscious thought
Strack & Deutsch (2004)	Reflective vs. impulsive system
Epstein (2003)	Experiential vs. rational thinking
Kahneman & Frederick (2002)	System 1(intuitive) vs. System 2 (reflective)
Riding (2001)	Visual vs. verbal processing
Stanovich &West (2000)	Analytic vs. interactional intelligence
Smith & DeCoster (2000)	Rule-based vs. associative processing
Sloman (1996)	Rule-based vs. associative processing
Evans (1996)	Heuristic vs. analytic thought
Bruner (1986)	Paradigmatic vs. narrative processing
Tversky & Kahneman (1983)	Extensional vs. intuitive reasoning

Another way of looking at cognitive styles is put forward in terms of visualizing and verbalizing (Childers, Houston, & Heckler,1985; Riding 2001). It is suggested that people use different cognitive styles in perceiving and encoding

information as well as elaborating on that information. With verbal processing cognitive activities involve abstract, conceptual and conscious style of thinking yet with visual processing thinking style is more sensory and affective.

A distinctive approach is advanced by Bruner (1986) that explains cognitive operations as a joint function of paradigmatic and narrative modes of thought. According to that the paradigmatic mode of thought is employed to methodically classify the information whereas narrative mode is employed to understand the association between the information that is categorized. Within this model two systems inherently clash with each other as paradigmatic mode constantly attempts to generalize and categorize information while narrative mode tries to discern and specify the same stimulus.

Sloman (1996) proposed a dual system theory that is composed of associative and rule-based processes. Associative processes produce fast responses using intuitive operations without being aware of the procedure. On the other hand rule-based processes require time and awareness of the rule implementation procedure. The capabilities of associative processes are limited to previous experiences. Unlike that, rule-based processes can extract, combine and interpret information using structured analysis, hence expand limitations of prior knowledge. Likewise Smith and DeCoster (2000) proposed a dual process model with associative and rule-based processes yet their model is founded on the two memory systems that people have. It is stated that people have two distinct memory systems corresponding to diverse sets of requirements. On the one hand “slow-learning” function is needed to categorize information and convert it to durable, persistent knowledge based on schemas on the other hand “fast-learning” function is needed to be able to recognize new stimuli

based on episodic retrievals. In line with that associative processing and rule-based processing aids these two incompatible needs of memory.

Dijksterhuis'(2004) conceptualization of the dual system comprise of conscious and unconscious thought. Within that, consciousness is characterized as having limited processing capacity and adequate elaborative skills whereas unconsciousness is depicted as having massive capacity to process information and incubation abilities that foster creativity. Similar to that Kahneman and Frederick (2002) proposed intuitive and reflective systems. They claim that the reflective system is a sophisticated system, characterized by deductive, effortful and controlled processes while intuitive system is a simple yet competent system, characterized by associative, effortless and automatic processes. It is stated that cognitive operations are transferred from the reflective system to the intuitive system as processes are learned and the efficacy of intuition is established. In a similar fashion, Strack and Deutsch (2004) developed a two-system model with reflective and impulsive processes in which reflective system operates on knowledge whereas impulsive system functions based on associations and motivations

Even though some of these models have distinctive standpoints (e.g. Bruner, 1986; Childers, Houston, & Heckler, 1985; Riding 2001) the basic premises of most of the models share some commonalities. In particular, the characteristics of the two systems overlap in majority of the dual system models. One of the most widely recognized and integrative dual process theories is Epstein's (1973, 1985, 1994, 2003) Cognitive Experiential Self Theory (CEST). According to that people have two information processing systems, namely the experiential system and the rational system. The experiential system is characterized as being holistic, affective, rapid and effortless whereas the rational system is characterized as analytic, logical, slow

and effortful (See Table 2 for the list of characteristics of the two systems). It is suggested that behavior is shaped by simultaneous, independent and interactive operations of both systems (Epstein, 2003). In other words, when faced with a stimulus, individuals' experiential and rational systems work at the same time, interacting with each other. The degree of reliance on both systems is contingent on various factors such as personality, nature of the task, and situational factors (Epstein, 1994).

Table 2. Characteristics of the Experiential and the Rational Systems

The Experiential System	The Rational System
1. Holistic	1. Analytic
2. Automatic, rapid rate of data processing	2. Controlled, slow rate of data processing
3. Produces emotional/affective responses	3. Produces logical, calculated responses
4. Passive, fluent cognitive operations	4. Active, effortful cognitive operations
5. Associative links	5. Logical, causal links
6. Contextual processing	6. Decontextualized processing

(Adapted from Epstein 1994)

The experiential system, which operates based on emotions and intuitions, progressed and adapted to the changes in the environment throughout the evolution of mankind (Epstein 2003). The experiential system operates by learning from experience hence facilitates adaptation to changing circumstances and increases chances of survival. Compared to the experiential system, the rational system is in its

infancy. Still, it has competency in abstraction, elaboration, analysis and weighted evaluation (Osman, 2004). It is suggested that judgments that are rapidly proposed by the intuitive system are monitored and overridden by the rational system (Kahneman & Frederick, 2002). Nevertheless, in terms of processing capacity the rational system is quite restricted. The widely acknowledged concept of bounded rationality suggests that people have limited cognitive abilities, limited short-term memory and limited computational skills (Simon, 1955). Dijksterhuis (2004) compares the experiential system to a modern computer and the rational system to an old abacus. With their contrasting characteristics these systems have distinct purposes and therefore perform differently for various tasks.

Factors Affecting Thinking Style

It is suggested that behavior is shaped by simultaneous, independent and interactive operations of both systems (Sloman 1996). In other words, when faced with a stimulus, individuals' experiential and rational system work at the same time, interacting with each other. Still, the extent of usage for both of them depends on various factors (Kahneman & Frederick, 2002).

Some people have a predisposition to employ experiential processing whereas others are more prone to use rational processing. It is demonstrated that even though the two systems work independently at the same time, degree of reliance on the rational or the experiential system varies between people. Using the Rational-Experiential Inventory (REI) Epstein et al. (1996) managed to measure individual differences in personality favoring rational versus experiential processing.

Apart from the predispositions, individuals' mood may influence whether they employ the experiential or the rational system. It is stated that affect, in particular the mood individuals are in, have a strong effect on the way they think (Eich, Kihlstrom, Bower, Forgas, & Niedenthal, 2000). It is demonstrated that with a positive mood people process faster, simpler, using more heuristic strategies yet with a negative mood they process slower, more systematically, using analytic and vigilant strategies.

Additionally, knowledge and expertise related to the task may influence relying on the experiential or the rational systems. It is indicated that people with knowledge and experience possess knowledge frameworks enabling them to engage in rational processing. In contrast, those who do not have knowledge hence the frameworks use heuristics and engage in experiential processes (Bettman & Park, 1980). Alba and Hutchinson (1987) asserted that for encoding information, making classifications and drawing inferences experts are more likely to employ rational processing whereas novices are more likely to employ experiential processing in order to avoid cognitive effort associated with analytic calculations.

Furthermore, the usage of experiential and rational processing varies according to situational factors. For instance, Finucane et al. (2000) showed that time available for deliberation influences the extent to which both systems operate. Using a time pressure methodology, they focused on the use of affect-based heuristics in an experimental setup. It is seen that under time pressure use of the rational system is restricted and use of the experiential system is intensified.

Prior research has shown that task demands can play a critical role in use of experiential or rational processing. Hammond et al. (1987) listed the characteristics of tasks that evoke experiential processing such as; large number of cues, perceptual

measurement of cues, low certainty in task and simultaneous display. On the other hand the characteristics of tasks that evoke rational processing are listed as small number of cues, objective measurement of cues, high certainty in task and sequential display.

One of the factors that influence the style of processing is the motivation underlying consumption activity. It is indicated that for activities that are inherently gratifying individuals have consummatory motives yet for those that are handled for extraneous purposes individuals have instrumental motives (Alderson 1957 as cited in Pham, 1998). It is demonstrated that when individuals have consummatory motives they are more prone to engage in experiential processes whereas when they have instrumental motives they utilize rational processing (Novak & Hoffman, 2009). Moreover, it is also shown that regulatory focus, another motivational orientation, influences the use of emotions and rational arguments when making judgments (Pham & Avnet, 2004). According to regulatory focus theory promotion oriented individuals value their hopes and dreams so they focus on positive outcomes while prevention oriented individuals' value duties and responsibilities so they focus on negative outcomes. It is shown that when individuals are promotion oriented they are more prone to employ experiential processing whereas when they are prevention oriented they are inclined to engage in rational processing (Novak & Hoffman, 2009).

Manipulation of Thinking Style

Several experimental procedures manipulated individuals' degree of experiential and rational thinking. One method is controlling thinking style via the judgment criterion

that the decisions are based. Asking individuals to evaluate options on an attribute base, encouraged rational processing whereas asking them to evaluate the options in a holistic manner, encouraged experiential processing (Pham et al. 2001, Yeung and Wyer 2004). Similarly, when individuals are expected to express their liking they engage in experiential processing while they engage in rational processing when they are expected to make a choice (Tversky & Griffin 1991). Furthermore, focusing on consummatory motives promoted experiential processing while, focusing on instrumental motives promoted rational processing (Pham, 1998).

Another approach to manipulate the thinking style is by handling the mental state of the decision makers. It is demonstrated that asking individuals to provide justifications for their choices, encouraged them to use reason based assessments and rely on rational processes yet when they are not asked to verbalize their choice they trusted their initial impressions that are formed with experiential processing (Wilson & Schooler, 1991). Furthermore, it is shown that it is possible to control individuals' thinking style by manipulating participants' trust in their feelings (Schwarz et al., 1991) and their cognitive load (Shiv & Fedorikhin, 1999).

In addition to that, changing the affective state of individuals influenced their thinking style as well. It is demonstrated that inducing a positive mood encourage people to choose less effortful processing strategies by using less information during decision process in order to avoid the cognitive effort that might disrupt the positive mood (Isen & Means, 1983). On the other hand subjects with negative mood engage in more extensive processing by examining one attribute at a time (Luce, Bettman, & Payne, 1997). Furthermore it is indicated that emotions linked with uncertainty such as hope and fear, encourage systematic, deep processing while emotions linked with certainty such as anger and joy initiate heuristic processing (Han, Lerner, & Keltner,

2007). It is also shown that increasing the subjective feeling of difficulty for any given choice task by adding to the assortment size or putting distractions like loud music, strengthens the likelihood to employ heuristic, intuitive strategies (Novemsky, Dhar, Schwarz, & Simonson, 2007).

The presentation mode of stimuli also influences whether individuals employed the rational system or the experiential system. It is demonstrated that making separate evaluations rather than joint evaluations require a holistic appraisal process rather than an attribute-by-attribute comparison process for that reason separate evaluations are more compatible with experiential processing and joint evaluations are more compatible with rational processing (MacInnis & Price, 1987). Moreover, it is determined that presenting real alternatives rather than the photographs of the alternatives (Shiv & Fedorikhin, 1999), providing photographs rather than cross sectional technical drawings (Yeung & Wyer, 2004), providing pictures rather than verbal descriptions (Hsee & Rottenstreich, 2004), and providing color pictures rather than black-and-white pictures (Lee, Amir,& Ariely, 2009) amplified the vividness of the stimuli hence steering individuals to rely on experiential systems more than rational systems.

Research in Thinking Style and Preference Consistency

According to economic theories of choice, consistency is the building block of rationality. It is generally suggested that decisions produced by rational processes are deliberative, systematic, and consistent. It is also indicated that emotional system causes irrationality and inconsistency. In spite of these commonly held beliefs, recently more evidence is found in favor of the experiential system. It is

demonstrated that when emotional system interferes with decision processes, the decisions are made faster (Pham et al., 2001), in a more accurate manner (Nordgren & Dijksterhuis, 2009) with more interpersonal and intrapersonal consistency (Pham, 2007).

Pham et al. (2001) determined that reason based evaluations (rational system) are less consistent than feeling based evaluations (experiential system) since they require more cognitive functions that possibly cause incongruity. Similarly, Hsee et al. (2009) confirmed that in comparison to liking (experiential system); choice (rational system) is more susceptible. Moreover, it is demonstrated that especially for complex decision (Dijksterhuis, Bos, Nordgren, & Van Baaren, 2006) unconscious thought processes produced superior results.

In addition to that Lee, Amir, and Ariely (2009) scrutinized on consistency and predictability of preferences given that individuals rely on affective information. In other words, findings of the study support that greater dependence on emotional reactions during decision making is associated with greater preference consistency and less cognitive noise. Hsee and Rottenstreich (2004) examined the influence of thinking style on quantitative aspect of a stimulus and person's subjective assessment of that stimulus. They asserted that based on the thinking style people employ, either "valuation by calculation" or "valuation by feeling", evaluations of quantitative or subjective attributes differed significantly.

Another study focused on the impact of introspection and too much elaboration on consistency of preferences (Wilson & Schooler, 1991). It is argued that when people elaborate excessively on a decision, they tend to break down the problem to several components which may result in nonoptimal preferences. Further, it is revealed that when people are asked to provide reasons for their evaluations, and

their reasons are not easily accessible, they tend to embrace the reasons that are most prominent which may again result in nonoptimal preferences. Similar to that Nordgren and Dijksterhuis (2009) demonstrated that relying too much on the rational system decreased the consistency of preferences. It is indicated that deliberation causes individuals to concentrate on specific aspects of a stimulus resulting in suboptimal evaluations.

A related stream of research analyzed the effect of thinking style on hedonic preferences. It is shown that even when individuals can experience usage of a hedonic product directly themselves, they don't rely on the valence or intensity of the affect induced from this experience; rather they seek specifications, a quantitative base for analytical and rational processing (Hsee et al. 2009). Despite the fact that specifications carry no valuable information for some hedonic items, they are weighted more heavily than feeling based responses in evaluations, creating a potential source of susceptivity of preferences.

In addition to the influence of the emotional system on consistency of individuals in their choices, the influence of the emotional system on consistency among individuals is examined as well. For instance, in one study subjects are asked to evaluate whether excerpts taken from the classical repertoire were happy or sad in nature (Peretz, Gagnon, & Bouchard, 1998). The results of the experiments showed that feeling based assessments were consistent across the participants. Another study examined the consensus effect of feeling based assessments using stimuli such as magazine pictures and TV commercials (Pham et al., 2001). It is found that compared to assessments made based on reason, those made based on feelings are in more agreement across participants.

CHAPTER 3

HYPOTHESES

Theories of cognitive psychology indicate that compared to the cognitive system, the emotional system is much more stable (Epstein 2003). Supported with the evidence form evolutionary psychology, it is stated that the experiential system has evolved to make rapid and accurate evaluations of important judgments hence it provides more stable outcomes compared with the rational system. It is also indicated that with the experiential system holistic type of processing is employed which is intact whereas with the rational system analytic type of processing is employed which is sensitive to changes in the components of the decision problem. Specifically it is proposed that since rational processing is sensitive to fluctuations in any one of the elements in the preference formation process, preferences that are established as a result of these processes are less stable compared to those that are established as a result of experiential processes. Furthermore, recent studies on consistency of judgments and preferences demonstrate that depending too much on rational systems at the expense of responses from experiential systems might hurt consistency of evaluative judgments (Pham et al. 2001, Nordgren and Dijksterhuis 2009, Hsee et al. 2009).

Overall, these findings suggest that when individuals disregard the affective reactions that are generated by the stimuli and make evaluations solely based on the rational system, the resulting assessments will be subject to decisional noise and they will be less consistent. Therefore;

H1a: Preferences will be more consistent when people rely on experiential processing than when they rely on rational processing.

Earlier studies demonstrated that the presentation mode of information influences the thinking style one engages in (Shiv & Fedorikhin, 1999; Yeung & Wyer, 2004; Hsee & Rottenstreich, 2004; Lee, Amir,& Ariely, 2009). Specifically, it is stated that affective stimuli induces experiential thinking whereas analytical stimuli induces rational thinking. Therefore, in relation to prior hypothesis;

H1b: Preferences will be more consistent when people utilize affective stimuli than when they utilize analytical stimuli.

The following hypothesis is developed based on the impact of congruency between thinking style and nature of the task. Novak and Hoffman (2009) demonstrated that when there is compatibility between task and approach taken doing the task, task performance is improved. In their study it is shown that when affective or analytical nature of a task is in agreement with the thinking style (either experiential or rational) task performance will increase.

Given that individuals' task performance increases when thinking style is appropriate for the nature of the task and decisions become more valid when there is such congruency, it is suggested that consistency of preferences will also be influenced with such an effect. Therefore, it is expected that people will have more consistent preferences when thinking style and task demands are congruent than when they are incongruent. In particular;

H2a: Preferences will be more consistent when people engage in experiential thinking with affective stimuli than with analytical stimuli.

H2b: Preferences will be more consistent when people engage in rational thinking with analytical stimuli than affective stimuli.

The next hypothesis is related to level of consensus on preferences. The literature is quite limited on the impact of thinking style on interpersonal agreement. Still, it is commonly believed that affective judgments are made based on personal tastes hence they are quite idiosyncratic. Moreover it is also presumed that reason-based judgments are more objective and made based on specific criteria hence they are perceived as more consensual. Contrary to these believes Pham et al. (2001) demonstrated that compared to reason based assessments, feeling based assessments created higher degrees of interpersonal agreement. Specifically, it is shown that people have higher degrees of agreement on their feelings towards a stimulus than on their rational appraisal of the same stimulus. It is suggested that affective reactions are the products of a more evolved and mature system relative to rational reactions (Pham et al., 2001). Consequently they are more predictable and consensual. Based on this finding of interpersonal agreement of affective responses, it is likely to conceive that the same effect exists for consensus on preferences. Thus;

H3a: The level of consensus on preferences will be higher when people employ experiential processing than when they employ rational processing.

H3b: The level of consensus on preferences will be higher when people utilize affective stimuli than when they utilize analytical stimuli.

In addition to the direct effects on preferences, thinking style and task format is expected to have an impact on metacognitive experiences. Fluency, an exemplar metacognitive experience, is defined as the ease or difficulty of processing new information (Tsai & McGill, 2011). Studies have shown that low processing fluency is associated with more deliberate, time consuming, analytical thinking style. Whereas high processing fluency is associated with intuitive, automatic, holistic thinking style (Schwarz, 2004). Moreover, it is also revealed that presentation format of information influence the level of fluency one experiences (Novemsky, Dhar, Simonson, & Schwarz, 2003).

Apart from that, it is demonstrated that fluency is significantly related to choice confidence (Tsai & McGill, 2011). Novemsky et al. (2003) demonstrated that when processing fluency decreased, people tend to defer choices. This suggests that confidence in choice is dependent on the fluency of the processes through which the choice is made. Parallel to that, purchase intention, which is a closely linked construct to choice confidence, is expected to be influenced by the degree of fluency one experiences while making a purchase decision. Therefore, it is predicted that;

H4: When people rely on experiential processing, (a) processing fluency, (b) choice confidence, and (c) purchase intention increases compared to when people rely on rational processing.

H5: When people utilize affective stimuli (a) processing fluency, (b) choice confidence, and (c) purchase intention increases than when they utilize analytical stimuli.

CHAPTER 4

RESEARCH METHODOLOGY

Overview

In order to test aforementioned hypotheses an experimental study was conducted. The main objective of this study was to examine the main and interaction effects of thinking style and task format on preference consistency and choice duration. Another goal of the study was to analyze the relationships among these factors and choice confidence, purchase intention and fluency. Furthermore the study tested whether consensus on preferences varies depending on thinking style and task format.

Participants and Design

A total of two hundred and forty students at a major İstanbul university participated in the study. Within the sample, ages ranged from 20 to 36 years ($\bar{X}$ = 26.74) with 56.25% male participants. Majority of the respondents (78.8%) were graduate students of MBA programs. Among those in the sample, 27.9% were married. Subjects were not informed about the purposes of the study and as an incentive they were given extra course credits to participate.

A 2 thinking style (experiential vs. rational) x 2 task format (affective vs. analytical) between subject design was employed. Participants were randomly assigned to one of the four experimental conditions (See Appendix A).

Stimuli Development

Armchairs were selected as stimulus material. They were considered appropriate for this study since they possess equally important hedonic and utilitarian attributes suitable for both affective and analytical presentations. It was essential that for the affective task format condition, the product alternatives had discernible sensory qualities, and for the analytical task format they had sufficient number of features with significance. Furthermore it was expected that participants, whose majority was above the age of 25, were involved with this product category.

A pilot test was made to make sure that the stimulus material was suitable for the task format manipulation. Thirty-eight graduate students (44.7% females, $\bar{X}_{age}$ = 23.95) participated in the study. Eight different product alternatives were prepared and several product characteristic attributes; such as dimensions, materials, maintenance, ergonomics, and durability were listed for the products. Participants initially examined the stimuli and after that they made a series of choices from the pairwise options presented. The stimuli were presented in affective task format for half of the respondents and in analytical task format for the other half. Next, they completed the Situation Specific Thinking Style scale (Novak & Hoffman, 2009), which measured the type of thinking participants engaged in while making the choices. Participants responded to both experiential and rational items of the scale. It was revealed that participants in the affective task format condition scored significantly higher on the experiential scale items ($\bar{X}$ = 5.56) compared to those in the analytical task format condition ($\bar{X}$ = 4.04) ($F_{1,37} = 15.109$, $p < .01$). Moreover, participants in the analytical task format condition scored significantly higher on the

rational scale items ($\bar{X}$ = 5.60) compared to those in the affective task format condition ($\bar{X}$ = 4.39) ($F_{1,37} = 3.855$, $p < .05$).

Experimental Procedure

The study was a computer-based study with several parts (See Appendix B). In the first part participants completed the thinking style priming task and were given thinking style instructions. Participants, who were in the rational thinking condition, were given six problems of Raven's Standard Progressive Matrices (Raven, 1976) that were expected to induce rational processing (Novak &Hoffman, 2008). The problems included a three by three matrix of geometric patterns with the last pattern missing. Participants were asked to find the missing pattern from eight choice options (See Appendix C). Following that they were given rational thinking instructions, such as: According to what most recent studies demonstrate, when individuals think carefully for evaluating objects, they can avoid wrong, regretful decisions. In other words, while appraising products people should think hard and elaborate on the reasons why the item is appealing or not. You will now see an assortment of various armchairs. Focus on the attributes of each alternative and their benefits. List pros and cons in your mind. Also consider how the features of the alternatives meet your needs.

Participants in the experiential thinking condition, on the other hand, were given the product improvement task from the Torrance Tests of Creative Thinking (Torrance 1990) that were expected to induce experiential processing (Novak &Hoffman, 2008). After showing the picture of a stuffed toy elephant, participants were asked to write down creative and novel ways of improving this toy to make it

more fun to play with (See Appendix D). Following that they were given experiential thinking instructions, such as: According to what most recent studies demonstrate, when individuals form prompt judgments about objects based on their intuition, they can reach accurate, satisfactory decisions. In other words, while appraising products people should rely on their first impressions and determine whether the item is appealing or not. You will now see an assortment of various armchairs. Try to visualize each alternative in your mind. Picture yourself sitting on each one of them. Try to imagine your experience as vividly as possible.

In the next part, all alternatives were presented together so that participants examined the stimuli for as long as they wanted. Product attributes were provided in addition to vivid photographs and drawings of the items. Once finished inspecting, participants were presented with 28 binary choice options and asked to indicate a preference for each option. Participants in the analytical task format condition were given the product attributes along with the drawings of the items, whereas those in the affective task format condition were given the vivid photographs (See Appendices E-I and E-II).

In the last section, participants completed the questionnaire that comprise of dependent and independent measures. Moreover, they responded to a set of items that function as a manipulation check for thinking style. Finally, demographic information was inquired.

Measures

Preference InConsistency

One of the main dependent variables for this study was preference inconsistency. The concept of transitivity was used as a measure of preference inconsistency similar to the study of Lee, Amir and Ariely (2009). Transitivity of preferences is one of the basic assumptions of rational choice theories (Tullock, 1964). Transitivity suggests that individuals have established and stable preferences such that if *x* is preferred to *y*, and *y* is preferred to *z*, then *x* should be preferred to *z*. Instead if *z* is prefered to *x*, it is considered a violation of the transitivity (Kendall & Babington Smith, 1940). Based on that, presenting participants with binary choice options and counting the number of transitivity violations provided a measure of preference inconsistency for this study (See Appendix F).

Choice Duration

Choice duration was measured by recording respondent's time spent while evaluating 28 binary choice alternatives.

Choice Confidence

Choice confidence was assessed by asking respondents "How confident are you with the choices you made" using a scale ranging from 1 (not confident at all) to 7 (extremely confident).

Purchase Intention

Purchase intention was assessed using Maheswaran and Sternthal's (1990) one item scale: "If you were to buy an item from this product category, how likely is that you would choose the highest scored alternative from this task?". Responses ranged from 1 (not likely at all) to 7 (extremely likely).

Fluency

Fluency, which attempts to assess the subjective feeling of ease or difficulty in processing information, was measured by asking respondents to describe their experience of evaluating alternatives. A 3-item semantic differential scale adopted from Kramer and Kim (2007) was employed. Participants were asked to describe to process of evaluating alternatives and making pairwise choices. Items included very simple (1) versus very complicated (7), effortful to read (1) versus effortless to read (1), difficult to process (1) versus easy to process (7). Cronbach's alpha estimate of the scale was .773.

Product Evaluations

Participants' evaluations of eight product alternatives was assessed by asking them to rate each alternative on a seven point scale ranging from 1 (very negativel) to 7 (very positive).

Situation Specific Thinking Style

In order to ensure that the manipulation is made successfully Situation Specific Thinking Style Scale (Novak & Hoffman, 2009) was used. The Situation Specific Thinking Style Scale has 20 items with 10 items for rational and the other 10 for experiential dimensions. The rational scale contained items such as "I tackled this task systematically" and "I arrived at my answers by carefully assessing the information in front of me." The experiential scale contained items such as "I trusted my hunches" and "I went by what felt good to me." The rational and experiential scales had high levels of internal consistency with a Cronbach's Alpha estimates of .903 and .931 respectively. This scale was utilized to test whether the experimental manipulations induced the intended effect.

Mood

To assess participant's mood Peterson and Sauber's (1983) four item scale was employed. The mood scale contained items such as "At this moment I feel edgy or irritable." and "As I answer these questions I feel cheerful". The items were scored on a scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale had internal consistency with a Cronbach's Alpha estimate of .797.

Purchase Decision Involvement

The level of involvement in purchase decision was measured using a three item, seven point scale adapted from Mittal (1995). Involvement with purchase decision

was delineated as the degree of interest and concern that a consumer handles for a purchase decision task. The scale consisted of three items such as “How important would it be to you to make a right choice of this product?” The scale had a Cronbach’s Alpha estimate of 0.618. It is suggested that values below 0.7 can be acceptable with psychological constructs due to the diversity of the constructs (Klein, 1999). Consequently, Cronbach’s Alpha value of 0.618 is considered acceptable for this study and the variable is kept for analyses.

Familiarity

Familiarity was assessed with a single item by asking respondents “ How familiar are you with this product category?” using a scale ranging from 1 (not familiar at all) to 7 (very familiar).

Preference for Consistency

It was expected that while some of the participants have no strong inherent preference for consistency, others might have such preferences. Therefore, in order to control for the effect of some of individual’s propensity to be consistent in their responses, a measure of preference for consistency (Cialdini, Trost, & Newsom, 1995) was employed. PFC scale contains 18-items such as “I make an effort to appear consistent to others” and “It doesn't bother me much if my actions are inconsistent”. A short version of PFC scale with 9-items was used for this study. The Cronbach’s alpha value for this scale was .865.

CHAPTER 5

DATA ANALYSES AND RESULTS

Prior to testing the hypotheses, all variables were checked for normality in terms of distribution. Skewness and kurtosis values of all variables were analyzed. Except for choice duration and consistency the values were within acceptable ranges. Skewness and kurtosis of consistency was within acceptable ranges when analysis was run across the experimental groups. Furthermore, there were more than thirty participants in each condition and number of participants was almost equal across the groups. Hence, the analyses were considered to be robust. Next, the assumption of homogeneity of variance is tested using Levene test and results showed equal variances for all variables.

Manipulation Checks

Thinking style and task format were manipulated in this study, as previously explained. In order to ensure that the manipulations were successful, participants completed the 10-item experiential and rational *Situation Specific Thinking Style* scales. The summated scores for both experiential and rational dimensions were calculated for each respondent. As predicted, the experiential thinking style scores were higher ($\bar{X}$ = 5.16) for participants in the experiential condition compared to those in the rational thinking condition ($\bar{X}$ = 4.69, $F_{1,238}$ = 7.739, p = .006). Similarly, the rational thinking style scores were higher ($\bar{X}$ =4.67) for participants in the rational condition compared to those in the experiential thinking condition ($\bar{X}$ = 4.19, $F_{1,238}$ = 9.795, p = .002). A similar pattern is observed for task format

manipulation. The experiential thinking style scores were higher ($\bar{X}$ = 4.99) for participants in the affective format condition compared to those in the analytical task format condition ($\bar{X}$ = 4.85, $F_{1,238}$ =.674, $p > .05$). Similarly, the rational thinking style scores were higher ($\bar{X}$ =4.48) for participants in the analytical condition compared to those in the affective task format condition ($\bar{X}$ = 4.38, $F_{1,238}$ = .309, $p > .05$). The effects of the task format manipulation were not significant, yet they were in the expected direction.

Hypotheses Testing

Main Analyses

It is expected that some of the dependent variables have significant intercorrelations hence bivariate correlations were calculated (Table 3). In line with previous literature, a significant positive correlation between choice duration and amount of inconsistency was observed ($r = .129$, $p < .05$). Moreover, there were significant correlations between choice confidence and purchase intention ($r = .755$, $p < .01$), fluency and choice confidence ($r = .137$, $p < .05$), and fluency and purchase intention ($r = .146$, $p < .05$) (See Appendix G for the means and standard deviations of the dependent variables).

Table 3. Pearson Correlations

	Choice duration	Inconsistency	Fluency	Choice confidence	Purchase intention
Choice duration	1				
Inconsistency	.129**	1			
Fluency	-.080	.066	1		
Choice confidence	.115	.105	.137**	1	
Purchase intention	.082	.048	.146**	.755***	1

* p < .10, ** p < .05, *** p<.01

Based on the intercorrelations, multivariate analyses were conducted to detect group differences along a combination of variables while controlling for the family-wise error rate. Furthermore, covariates were entered in the analysis so that possible confounding effects can be eliminated. Initially a MANCOVA was performed for inconsistency and choice duration as dependent variables (See Table 4 for results).

Table 4. MANCOVA Results for Preference Inconsistency and Choice Duration

	Wilks' Lambda	df	F	Sig.	Partial Eta Squared
Mood	.974	2, 233	3.119	**	.026
Involvement	.977	2, 233	2.763	*	.023
Thinking_style	.998	2, 233	.262	n.s.	.002
Task format	.925	2, 233	9.381	***	.075
Thinking_style * Task format	.987	2, 233	1.525	n.s.	.013

* p < .10, ** p < .05, *** p<.01

MANCOVA analysis failed to show significant main effects of thinking style ($F_{2,233}$ = .262, p > .10, partial η2 = .002). On the other hand results indicated a significant main effect of format on preference consistency and choice duration ($F_{2,233}$ = 9.381, p < .001, partial η2 = .075). There were no significant interaction effects of thinking style and task format ($F_{2,233}$ = 1.525, p = .220, partial η2 = .013).

The covariate, mood, was significantly related to inconsistency score and choice duration ($F_{2,233}$ = 3.119, p = .046, partial η2 = .026). Moreover, participant's level of involvement was significantly related to inconsistency score and choice duration as well ($F_{2,233}$ = 2.763, p = .065, partial η2 = .023). For the other covariates, MANCOVA failed to show significant effects, namely for familiarity ($F_{2,233}$ = .105, p = .900, partial η2 = .001), and preference for consistency ($F_{2,233}$ = .709, p = .493, partial η2 = .006), ($F_{2,230}$ = .364, p = .695, partial η2 = .003), hence removed from analysis.

Following the multivariate analysis univariate analyses were performed to further investigate the effects of independent variables and covariates on the dependent variables. As covariates, only mood and involvement were entered in the analyses since others had no significant effect on the dependent variables.

Firstly, an ANCOVA was performed using inconsistency as the dependent variable (See Table 5 for results). The main effect of thinking style on inconsistency was not significant ($F_{1,234}$ = 9.892, p > .05). Therefore, H1a was rejected. The results indicated a significant main effect of task format on level of inconsistency ($F_{1,234}$ = 5.178, p < .05). Supporting H1b, participants in the analytical format condition had higher inconsistency scores ($\bar{X}$ = 5.00) than those in the affective format condition ($\bar{X}$ = 3.02). ANCOVA further showed a significant effect of involvement ($F_{1,234}$ =

5.058, $p < .05$) and mood ($F_{1,234} = 5.083$, $p < .05$) on inconsistency. The interaction between format and thinking style was not significant ($F_{1,234} = .034$, $p > .10$).

Table 5. ANCOVA Results for Inconsistency as Dependent Variable

Source	df	F	Sig.
Involvement	1, 234	5.058	**
Mood	1, 234	5.083	**
Thinking_style	1, 234	9.892	n.s.
Task format	1, 234	5.178	**
Thinking_style * Task format	1, 234	0.034	n.s.

* $p < .10$, ** $p < .05$, *** $p<.01$

In order to test the second hypotheses a series of planned contrasts were run. In the experiential thinking condition, having affective stimuli created a marginally significant effect on preference consistency compared to having analytical stimuli ($M_{affective} = 2.94$, $M_{analytical} = 5.09$, $t(235) = -1.73$, $p = .085$) . Therefore, H2a was partially supported. On the other hand, in the rational thinking condition, having analytical stimuli did not create a significant effect on consistency compared to having affective stimuli (($M_{affective} = 3.10$, $M_{analytical} = 4.92$, $t(235) = -1.49$, $p = .139$). Consequently, analysis failed to provide support for H2b.

The differences of the level of consensus between participants across experimental conditions were examined using non-parametric tests. In order to operationalize consensus initially coefficients of variation for the product evaluation ratings were computed. The coefficient of variation, which is the ratio of standard deviation to the mean (σ / μ), provides a measure of dispersion of evaluations. By taking the reciprocal values of the coefficient of variations a measure of consensus is

obtained. For all eight product alternatives the consensus scores were calculated for each group (μ / σ) (See Appendix H). The consensus scores for experiential-rational thinking style conditions and affective-analytical task format conditions were compared using Wilcoxon signed-rank test. In particular, exact test was employed since it is an accurate method for small samples (Field, 2009). Contrary to what was expected, the results indicated that consensus levels were significantly higher among participants in the analytical format condition (Mdn = 2.940) than those in the affective format condition (Mdn = 2.752) (z = -2.521, $p < .01$). In a similar way, the difference in consensus levels of participants in the rational thinking condition (Mdn = 2.902) and those in the experiential thinking condition (Mdn = 2.826) was marginally significant (z = -1.680, $p = .055$). Even though a difference exists it is in the opposite direction of what is expected hence, H3 was rejected.

Table 6. Wilcoxon Signed Ranks Test for Level of Consensus

	Thinking style	Format
	Experiential - Rational	Analytical - Affective
Z	-1.68	-2.521
Exact Sig.	0.0547	0.004

Next, an ANCOVA was performed using choice duration as the dependent variable (See Table 7 for results). The results indicated a significant main effect of format on choice duration ($F_{1,234}$ = 15.167, $p < .01$). Participants in the analytical format condition spent more time for choice ($\bar{X}$ = 2.95) than those in the affective format condition ($\bar{X}$ = 2.07). Furthermore, the interaction effect between thinking style and format was marginally significant ($F_{1,234}$ = 2.943, $p < .09$).

Planned contrasts revealed that, for the participants in the rational thinking condition, analytical format required longer time for choice than affective format ($\bar{X}_{analytical} = 3.22$, $\bar{X}_{affective} = 1.96$, $t(236) = 4.336$, $p < .001$). However, choice duration in the experiential thinking condition did not vary significantly between analytical and affective format ($\bar{X}_{analytical} = 2.67$, $\bar{X}_{affective} = 2.18$, $t(236) = -1.460$, $p = .146$). No other effects were significant.

Table 7. ANCOVA Results for Choice Duration as Dependent Variable

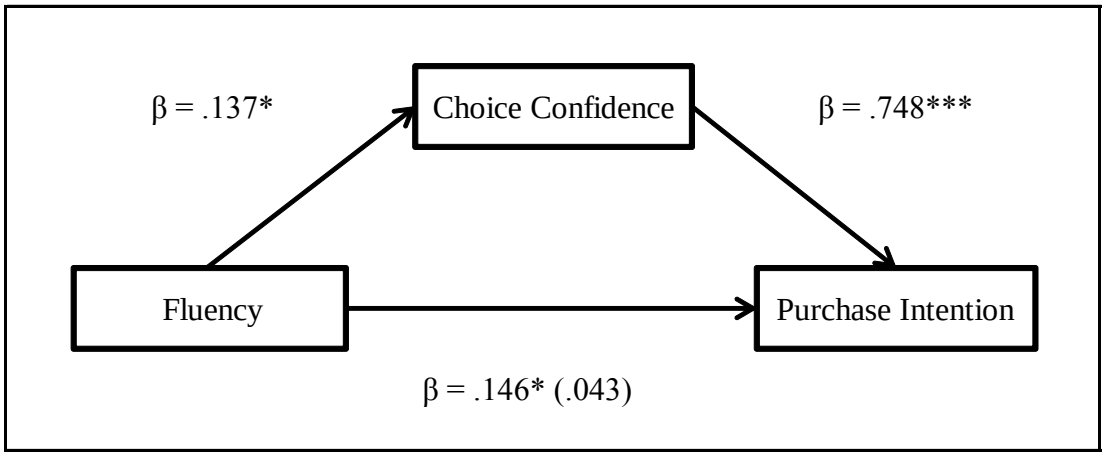
Source	df	F	Sig.
Involvement	1, 234	0.236	n.s.
Mood	1, 234	1.676	n.s.
Thinking_style	1, 234	0.521	n.s.
Format	1, 234	15.167	***
Thinking_style * Format	1, 234	2.943	*

* p < .10, ** p < .05, *** p<.01

Since significant correlations were observed between choice confidence and purchase intention ($r = .755$, $p < .01$), fluency and choice confidence ($r = .137$, $p < .05$), and fluency and purchase intention ($r = .146$, $p < .05$), the nature of the relationships among these variables were investigated further.

It was expected that confidence mediated the effect of fluency on purchase intention. Therefore, a mediation analysis was conducted using these variables. The mediation conventions from Baron and Kenny (1986) were employed to investigate whether choice confidence mediates the relationship between fluency and purchase intention. A series of regression analyses were performed (See Figure 1). Initially, fluency had a significant effect on purchase intention ($\beta = .146$, $t(214) = 2.154$, $p <$

.05). Secondly, the effect of fluency on choice confidence was also significant (β = .137, t (214) = 2.118, p < .05). Finally, choice confidence was entered in this model as a predictor of purchase intention. Results showed that the effect of choice confidence on purchase intention was significant (β = .748, t (213) = 16.535, p < .01) and the effect of fluency on purchase intention became non-significant (β = .043, t(213) =.958, p > .34). Moreover, the significance of the indirect effect was examined by the Sobel test (Preacher & Hayes, 2004). Sobel test confirmed that the effect of fluency on purchase intention was mediated by choice confidence (Sobel z = 1.999, p < .05).



Note: Number in parenthesis is beta value after the mediating variable is entered into equation
* p < .05, ** p < .01, *** p<.001

Figure 1. Choice Confidence as a Mediator between Fluency and Purchase Intention

Following that a multivariate analysis of variance using fluency, choice confidence, and purchase intention as dependent variables was employed. MANOVA showed no significant effects. The main effect of thinking style ($F_{3,210} = 2.098$, p =.10, partial η2 = .029), the main effect of task format ($F_{3,210} = 1.297$, p > .10, partial η2 = .018) and the interaction effect between thinking style and task format ($F_{3,210} = .039$, p

>.10, partial η2 = .001) were not significant. The covariates did not produce any effect as well. The main effect of thinking style ($F_{1,212} = 4.456$, $p < .05$, partial η2 = .022) and format ($F_{1,212} = 3.622$, $p = .065$, partial η2 = .016) on fluency were significant, providing support for hypotheses H4a and H5a. Participants in the experiential thinking condition had higher fluency scores ($\bar{X} = 3.89$) than those in the rational thinking condition ($\bar{X} = 3.52$). Furthermore, those in the affective format condition had higher fluency scores ($\bar{X} = 3.87$) than those in the analytical format condition ($\bar{X} = 3.53$). The main effect of thinking style and format were not significant for choice confidence , so H4b and H5b are rejected. Moreover main effect of thinking style and format were not significant for purchase intention. As a result the findings failed to provide support for H4c and H5c as well.

Table 8. Multivariate and Univariate F-values for Choice Confidence, Purchase Intention, and Fluency

	MANCOVA	Choice confidence	Purchase Intention	Fluency
Involvement	1.193	.253	1.858	1.458
Mood	.746	.868	.711	1.002
Thinking_style	2.098	.022	.383	4.732**
Task format	1.297	.016	.398	3.420*
Thinking_style * Task format	.039	.038	.081	0.053

note: MANCOVA df = 3,210, univariate df = 1,212
* p < .10, ** p < .05, *** p<.01

CHAPTER 6

DISCUSSIONS, IMPLICATIONS, LIMITATIONS, AND DIRECTIONS FOR FUTURE RESEARCH

Discussions

Preference Consistency

First of all, the results of the present study show that consumers in the affective format condition have more consistent preferences than those in the analytical format condition. Specifically it is found that after reviewing all information related to alternatives; those who saw the vivid photographs of alternatives at choice stage and employed the experiential system in processing were more consistent in their evaluations than those who saw the attribute information and the reminding sketch at choice stage thereby employing the rational system. This finding suggests that after forming an initial evaluation if consumers compare the attributes of alternatives at choice, they end up with inconsistent preferences. It is probable that the preference for specific attributes shifted depending on the choice set and due to the context effect preferences become inconsistent after a number of binary choices. Alternatively, if they make comparisons based on the affective input, the holistic evaluations are not that easily swayed by contextual factors.

Secondly, the results fail to show any significant main effect of thinking style on preference consistency. We suppose that the manipulation of the task format had such a significant effect on consistency that it eradicates the impact of thinking style. Specifically, even when participants are instructed to engage in an experiential

thinking style, if the information is presented in the analytical format, they failed to do so.

Furthermore, it is seen that the congruency between thinking style and task format create an effect on consistency only for participants in the experiential condition. Consumers, who engage in experiential thinking and received information in affective format, are more consistent in their evaluations than those who engage in experiential thinking and received information in analytical format. This finding suggests that when consumers rely on their intuition and gut feelings for their evaluations, affective format enabled them to be less susceptible to the choice context.

Consensus

Regarding the impact of thinking style and task format on consensus levels, findings do not support the hypotheses. The differences between experiential-rational thinking style and affective-analytical format are significant yet the direction is opposite to what was expected. Participants in the rational thinking condition had more interpersonal agreement on evaluations of the products compared to those in the experiential thinking condition. Similarly, degree of consensus among consumers in analytical format condition was higher than degree of consensus among consumers in affective format condition.

This finding disagrees with prior study (Pham et al., 2001), which demonstrated that affective reactions are more consistent across individuals than reason-based assessments. One possible explanation for this contradiction is that previous studies induced lower-order affective reactions whereas the affective format

and experiential thinking instructions of the present study induced higher-order affective reactions. The lower-order affective reactions arise from involuntary, impulsive processes and higher-order affective reactions arise from deliberative processes (Shiv & Fedorikhin, 1999). The stimuli employed in the present study and the nature of the task require appraisals and reasoning. On the other hand for previous studies participants engaged in rather simple and automatic processes. It might be the case that since higher-order affective reactions are susceptible to contextual factors (Medvec, Madey, & Gilovich, 1995), the preferences of participants in the experiential thinking condition and in the affective format condition were not as consensual as prior studies that induced lower-order affective reactions. In rational thinking and analytical format conditions, consumers could identify superior alternatives based on tangible attribute comparisons. Consequently, the results of these calculations and assessments point to more similar preferences.

Additionally, it is indicated that joint evaluations require an attribute-by-attribute comparison process, which is compatible with rational processing, and separate evaluations require a holistic approach, which is compatible with experiential processing (MacInnis & Price, 1987). It is also possible that since binary choice task is more compatible with rational processing, for the participants in the experiential thinking condition the task was more difficult. As a result the degree of consensus among participants in experiential condition is lower than the degree of consensus among participants in rational condition.

Choice Duration

In addition to the effects on consistency, the impact of thinking style and format on choice duration is examined as well. Pearson correlations show a significant relation between choice duration and level of inconsistency. The positive correlation indicates that as consumers spent more time in evaluation, they become more inconsistent. This finding is in line with previous research, which demonstrated that with increased deliberation, preference consistency reduces (Nordgren & Dijksterhuis, 2009).

Even though participants in the analytical format condition spent more time for choice than those in the affective format condition, a similar effect was not observed for experiential and rational thinking style conditions. The difference of choice duration between experiential and rational thinking style was not significant. This finding further supports our explanation that format had a very strong effect on consistency that it reduced the impact of thinking style. Consequently, participants that are instructed to list pros and cons, elaborate on reasons did not spent more time in evaluation than those that are instructed to rely on first impressions.

A final finding regarding choice duration point that for the participants in the rational thinking condition, analytical format required longer time for choice than affective format whereas for the participants in the experiential thinking condition no such effect is observed. This finding is quite understandable that when thinking rationally analytical format provides more material to dwell on compared to affective format. However thinking in an experiential way, consumers are not deliberating on pros and cons hence time required to make an evaluation does not differ between different task formats.

Furthermore, analyses exploring the relationship between fluency, choice confidence, and purchase intention are made. It is shown that fluency has an impact on choice confidence such that with increased fluency, confidence in choice improves. Moreover, choice confidence influences purchase intentions in a way that with increased confidence purchase intentions improved as well. This finding is in line with previous literature, which suggests that consumers feel more confident in their evaluations if they can retrieve and process information easily (Gill, Swann, & Silvera, 1998; Petty, Brinoll, & Tormala, 2002). It is further demonstrated in prior studies that intentions to purchase a particular item is directly influenced by the degree of confidence in evaluation (Bennett & Harrell, 1975; Laroche, Kim, & Zhou, 1995).

Additionally, results show that as predicted thinking style and format has an effect on fluency. Experiential thinking induces a more fluent evaluation process compared to rational thinking. Similarly, affective format generates a more fluent evaluation process compared to analytical format. Processing fluency improves with experiential thinking and affective format since these allow consumers to effortlessly make evaluations based on their gut feelings whereas rational thinking and analytical format requires profound elaboration. Even though there aren't any direct effects of thinking style and format on choice confidence and purchase intention, fluency, which is significantly influenced by the thinking style and the format affects choice confidence and purchase intention. Consequently, we can deduce an indirect effect of thinking style and format on choice confidence and purchase intention.

Theoretical and Practical Implications

This study contributes to the stream of research on preference consistency. It is demonstrated that preference transitivity is compromised when consumers chose between alternatives in the analytical format instead of the affective format. In both cases consumers initially evaluated the products on their own and formed global evaluations of the products. While doing the pairwise comparisons, in the affective format consumers relied on their holistic views whereas in the analytical format they re-evaluated the products based on the comparison of the attribute information of the set of alternatives. For every alternative set, the choice context differed significantly, ergo the importance of different attributes. Consequently, preferences become more susceptible for analytical format condition.

Another important contribution is made regarding the role of thinking style and format on the extent of interpersonal agreement. It would be impetuous to deduce that interpersonal agreement increases with analytical thought. However, the present study puts forward the early evidence indicating increased consensus on preferences with rational thinking and analytical format compared to experiential thinking and affective format. These findings suggest that experiential thinking and affective format lead to idiosyncrasy of preferences. On the other hand rational thinking and analytical format lead to consensus on preferences, which might bring about either notably more or less popular products depending on the valence of accorded preferences.

A further implication for consumers is that choice duration impairs consistency of preferences. The longer consumers deliberate on the choice between

alternatives and the longer they compare the features of the alternatives, the less consistent they become. On this account, if consumers initially assess products on their own and make comparisons based on these evaluations swiftly without too much deliberation, they may end up with more consistent preferences and experience more happiness and less regret as a result of their choices.

In addition to the theoretical implications, this study provides implications for marketing practitioners. Those that are attempting to know their customers' innate preferences and that are willing to be able to predict their customers' choices, should attend to their affective responses. Preferences that are produced by the experiential system are more stable compared to preferences that are produced by the rational system. Therefore, market research that is made to understand the innate preferences should assess preferences generated by the experiential system.

This study further extends the research on the relationship between thinking style, task format and fluency. It is demonstrated that experiential thinking style and affective format result in more fluent decision processes than rational thinking and analytical format. This finding provides some implications for advertising practitioners who are constantly trying to break away from competitive ads and lure consumers into paying attention to their ads and process given information. The findings suggest that advertising practitioners can increase the processing fluency of their ads by designing affect-rich ads and encouraging the target audience to rely on their gut feelings. Fluently processed ads, improve consumers confidence in their decision and also increase their intention to purchase.

Limitations and Directions for Future Research

One of the experimental manipulations was induced by a priming task of thinking style followed by instructing participants to engage in one specific type of thinking style, either experiential by relying on gut feelings or rational by engaging in deliberative processing. However, even after the priming and the instructions, at pairwise selection stage participants engaged in thinking style that is more suitable for the given task. Consequently, the manipulation of the task format had such a strong effect that, it masked the manipulation of thinking style. A more subtle manipulation of task format might allow the researchers to observe the direct influence of thinking style and congruency effects on preference consistency as well.

Another area for future research is examining the relationship between thinking style and task format and preference consistency with a temporal aspect. Specifically, measuring consistency as a constancy of evaluations made at different points in time would produce interesting results for this stream of research. Furthermore, not many studies examined the influence of dual systems on the consensus of preferences. While Pham et al. (2001) demonstrated increased consensus levels with the use of the experiential system, this study showed increased consensus levels with the use of rational system. Consequently, new evidence to corroborate the findings of this study is needed. Furthermore, this study did not investigate the underlying mechanism of the consensus effect. It would be fruitful to test the interpretation made in this study and some alternative accounts to explore the impact of thinking style and task format on the extent of interpersonal agreement.

PART 2: IMPACT OF MENTAL CONSTRUAL ON CONSISTENCY OF CONSUMER PREFERENCES

CHAPTER 1

INTRODUCTION

Standing at a distant point from an object, the fundamental characteristics of the object are more discernable, yet if you get closer the details become more salient. Construal effects investigate such shifts in mental representations and their effects on attitudes, decisions and behavior (Trope & Liberman, 2000). This shift in evaluation processes provides a fruitful level of analysis to gain a better understanding of preference consistency.

A number of studies investigated the impact of mental construal on preference reversals. These investigations focused on determining the effect of changes in construal level on preference for various characteristics of alternative choices. In other words researchers were mostly interested in the types of information people selectively attend to in evaluating alternatives and forming preferences with different levels of mental construal. However there has been a lack of interest in examining the change in the degree of consistency for different construal levels. One of the main contributions of this study therefore will be furthering the insight in the shift in evaluation based on construal level, which might enrich our understanding of labile preferences. Moreover, prior studies generally adopted a between subjects design in their experimental studies to assess differences between high-level and low-level construals even though the effects of within subjects manipulations of high-level and low-level construals are relatively

unknown. Nevertheless, the effects of mental construal on the consistency of consumer preferences are examined with a longitudinal approach in this study.

The main research question that is investigated with this research is whether consumers have more consistent preferences with a high-level or a low-level mental construal. In addition to that the question of how having matching versus non-matching mental construals at two evaluation periods affects consistency of preferences is analyzed. It is proposed that high-level construals lead consumers to more consistent preferences than low-level construals. Moreover, it is suggested that matching mindsets at two points of evaluation should produce more consistent preferences than non-matching mindsets.

In the next section, a review of previous research on construal level theory is made. Based on that, hypotheses that will be tested in this study are generated. Then the experiment that examines the relationship between mental construal and preference consistency is explained. Following that the experimental research that is conducted is described and the analysis and findings are reported. In the final section, a discussion of the findings, their implications, and suggestions for future research are presented.

CHAPTER 2

LITERATURE REVIEW

Construal Level Theory

Construal level theory (CLT) posits that psychological distance, which is defined as the subjective feeling of remoteness from the self, here, and now, influences the way people mentally represent objects and events (Trope & Liberman, 2010). As psychological distance increases, the objects/events will be represented at a higher level in an abstract manner and as the distance decreases the objects/events will be represented at a lower level in a concrete manner (Trope, Liberman, & Waslak, 2007).

Four main dimensions of psychological distance are examined within CLT, namely temporal distance, spatial distance, social distance and hypotheticality (Liberman, Trope, & Waslak, 2007). Majority of the studies within construal literature investigated temporal effects and found corroborating evidence that distant future events are construed in an abstract way, yet near future events are construed in a concrete way (Trope & Liberman, 2003). Furthermore, a multitude of studies substantiated that mental representation of spatially distant objects/events were more abstract than spatially close objects/events (Fujita, Henderson, Eng, Trope, & Liberman, 2006). Similarly, the relationship between social distance and mental construal was determined in which behavior of socially distant people, who are dissimilar to oneself, was construed at a higher level than behavior of someone who is more similar to oneself (Liviatan, Trope, & Liberman, 2008a). In addition to that, probability of an event happening influenced its mental representation such that less

probable events are seen more distant and construed in an abstract fashion compared to probable events (Waslak, Trope, Liberman, & Alony 2006).

Abstract (High-level) and Concrete (Low-level) Construals

Construal level theory suggests that every behavior can be mentally represented in an abstract or a concrete manner (Trope & Liberman 2000). High-level construals are associated with abstract mindsets, yet low-level construals are associated with concrete mindsets (Freitas, Gollwitzer, and Trope 2004). It is stated that depending on the focus on how the behavior is performed or why it is performed, the level of abstraction shifts from low-level end to high-level end of construal continuum. For instance, "locking a door", could be construed as "putting the key in the lock" which is the low-level representation of how one performs an action or it could be construed as "securing the house" which is the high-level representation of why one performs an action (Vallacher and Wegner 1987).

There has been extensive research examining the varying impact of abstract and concrete mental construal in several areas. For instance, a study in values investigated the impact of mindset on expression of values through behaviors (Torelli & Kaikati, 2009). It is demonstrated that when people embraced an abstract mindset, their judgments and behaviors are compatible with their previously expressed values as abstract mindsets enabled people to concentrate on their abstract goal; hence facilitate construing situations regarding relevant values. In a similar domain it is determined that when individuals adopted a concrete mindset, their evaluations are influenced by the opinions of other people (Ledgerwood, Trope, & Chaiken, 2010). However, when they adopted an abstract mindset, they are not easily

swayed by other people, instead they remain true to their ideological values. The reasoning of this effect is explained by the decontextualized nature of high-level construals and contextualized nature of low-level construals.

Another study examined the effects of abstract and concrete mental construals on people's expectations for goal performance and goal completion (Naufel & Beike, 2009). It is indicated that abstract mindsets are closely related to goal performance (e.g. expected grade) and concrete mindset are closely related to goal completion (e.g. passing the course). Since low-level construals focus on feasibility aspects of an action, expectancy of goal completion increases with concrete mindsets. On the other hand high-level construals focus on desirability aspects of an action so expectancy of performing better increases with abstract mindsets.

Furthermore, it is revealed that changing level of construal caused a "processing shift" which either enhances or diminishes task performance. While concrete mindset is appropriate for analytical problem solving tasks, it hinders performance for tasks related to insight and creativity (Förster, Friedman, & Liberman, 2004). In relation to that, the match between mental construal and given attributes also influences perception of task difficulty. It is shown that when individuals are given non-comparable choice alternatives, those who adopt an abstract mindset experience less decision difficulty than those who adopt a concrete mindset (Dhar & Kim, 2007).

CLT is mainly related to the type of information that is selectively put to use while making an evaluation (Lynch & Zauberman, 2007). High-level construals are defined as abstract representations that focus on the superordinate goals related to a decision whereas low-level construals are concrete representations that focus on the subordinate goals (Kardes, Cronley, & Kim, 2006). Furthermore, the weights given to each piece of information during this evaluation is determined by construal levels as well. Consequently, when construal level is high evaluations focus on abstract, decontextualized, core features and desirability concerns; and when construal level is low evaluations focus on concrete, contextualized, peripheral features and feasibility concerns (Ledgerwood, Trope, & Chaiken, 2010).

A number of studies attempted to sort out the characteristics, which have varying weights in evaluations depending on the mental construal (See Table 9 for the principal characteristics of low-level versus high-level construals). One such characteristic is primary (goal relevant) versus secondary (goal irrelevant) types of product attributes (Kray, 2000; Liviatan, Trope, & Liberman, 2008b). It is demonstrated that core features of objects (e.g. sound quality of a radio) have a more significant role in judgment than peripheral features of objects (e.g. timer of a radio) when construal level is high than when it is low (Trope & Liberman, 2000).

Another line of research examined the impact of construal level on assessment of positive and negative aspects of target objects / events. It is asserted that pros become more pronounced with high-level construals, whereas cons become more pronounced with low-level construals (Eyal, Liberman, Trope, & Walther,

2004). It is indicated that for a variety of actions, consumers list more positive aspects than negative aspects when level of construal is high.

Construal levels also affect perceived similarities and differences based on subordinate and superordinate features. When individuals are given pairs of activities, some of which are similar at a superordinate level and others are similar at a subordinate level, perceived differences for activities that are similar at a superordinate level increase with a concrete mindset (Day & Bartels, 2004). In line with that perceived differences for activities that are similar at a subordinate level increase with an abstract mindset.

Table 9. Characteristics of High Level and Low Level Construal

High level construals	Low level construals
Abstract representations	Concrete representations
General	Incidental
Decontextualized	Contextualized
Primary (core) features	Secondary (peripheral) features
Positive features	Negative features
Non-alignable features	Alignable features
Desirability concerns	Feasibility concerns
Superordinate goals (ends)	Subordinate goals (means to ends)

Adapted from Kardes, Cronley, & Kim (2006)

A further characteristic of construal levels is desirability versus feasibility aspects. Desirability aspects refer to end state while feasibility aspects refer to means used to reach that end state. It is shown that high desirability and low feasibility options e.g. getting 10 free CDs as a promotion at an inconvenient location, are

preferred to low desirability and high feasibility options e.g. getting 1 free CD as a promotion at a convenient location, when construal level is high than when it is low (Todorov, Goren, & Trope 2007). Moreover, it is shown that when ad claims which are viewed from a distance, emphasize desirability aspects of a promoted brand, consumer's receptivity increases. Similar results are achieved when feasibility aspects are emphasized for ads viewed at a close distance (Dhar & Kim, 2007).

Attribute alignability constitutes an additional varying characteristic between levels of construal. Since non-alignable attributes, which have no corresponding features in the other alternative, require an abstract representation, they are emphasized more with high-level construals. Likewise, alignable attributes, which are comparable features with the other alternative requires a concrete representation; hence they are emphasized more with low-level construals (Trope & Liberman, 2010). A study using two brands of popcorn revealed that alignable better alternatives are preferred when construal level is low and non-alignable better alternatives are preferred when construal level is high (Malkoc, Zauberman, & Ulu, 2005). In line with that, it is demonstrated that when evaluating non-comparable alternatives, construal level affects perceived decision difficulty. Mentally representing non-comparable alternatives at a high-level produces decreased decision difficulty ratings in comparison to representing them at a low-level (Kim, Khan, & Dhar, 2007).

Factors Effecting Mental Construal

Several studies have analyzed the impact of psychological distance on mental construal. The impact of psychological distance on one's level of construal is evident

in temporal (e.g. Liberman & Trope, 1998; Khan, Zhu, & Kalra, 2011), spatial (e.g. Henderson, Fujita, Trope, & Liberman, 2006), social (e.g. Liviatan, Trope, & Liberman, 2008a; Smith & Trope 2006), and probabilistic (e.g. Waslak, Trope, Liberman, & Alony 2006; Todorov, Goren, & Trope, 2007) dimensions. For all four dimensions specified by CLT, as distance from the object increases, higher levels of representations are construed (Bar-Anan, Liberman, & Trope, 2006).

In addition to the widely accepted dimensions of psychological distance, a number of new dimensions are later on put forward. For instance, it is argued that sensory distance, which decreases with first-hand experience, influences level of construals (Kardes, Cronley, & Kim, 2006). In a similar fashion, it is asserted that experiential distance, which is based on first-hand information rather than second-hand communication has an impact on level of construal levels as well (Hertwig, Barron, Weber, & Erev, 2004). Moreover, affective distance, which is related to emotional load of information, is proposed as a distance dimension (Fiedler, 2007). According to that, pictorial representations, which are vivid and concrete, lead to decreased affective distance as opposed to verbal representations, which are pallid and abstract (Amit, 2006). Alexander, Lynch, and Wang (2008), further suggested psychological newness as a substitute for psychological distance. A comparison between really new and incrementally new products showed that anticipated use of the break-throughs are expressed in a more abstract manner than that of incrementally new products.

Additionally, mood effects have been examined in the construal field. It is asserted that mood influences not only what people think (informational effects) but also how they think about it (processing effects) (Eich, Kihlstrom, Bower, Forgas, Niedenthal, 2000). Pleasant conditions are perceived as psychologically distant yet

threatening conditions are perceived as psychologically close (Trope, Liberman, & Waslak, 2007). Based on that it is established that positive mood, which implies pleasant conditions induces abstract mindsets and negative mood, which implies threatening conditions induces concrete mindsets (Labroo & Patrick, 2009).

A substantial body of research has focused on the effect of fluency on mental construal. Fluency is experienced as a result of ease in retrieval of information from memory along with ease in processing novel stimuli (Schwarz, 2004). Both fluency and construal constructs are pertinent to processing of information. Studies exploring these constructs found out that as fluency increases, level of construal increase (Alter & Oppenheimer, 2009), at the same time, as level of construal increases, fluency perceptions increase too (Tsai & Thomas, 2011). It is demonstrated that fluency, which is an indicator of perceptual proximity, lead people to engage in a concrete mindset whereas disfluency, which is an indicator of perceptual distance, lead people to engage in an abstract mindset (Alter & Oppenheimer, 2009). It is further revealed that at low construal level, fluency increases choice confidence since it is interpreted as one's greater capability. At high construal level, fluency decreases choice confidence for the reason that it is interpreted as inadequacy of the effort exerted (Tsai & McGill, 2011).

The relationship between mental construal and regulatory focus has been reported in prior studies. One example research measured the construal levels of participants who were primed with either a promotion or a prevention focus (Lee, Keller, & Sternthal, 2009; study 1 & 2). It was indicated that prevention focus induces a lower-level construal than promotion focus as people with a prevention focus try to restrain number of mistakes by concentrating on the feasibility of an activity. People with promotion focus, on the other hand, are in pursuit of

achievement and progress; hence they concentrate on the desirability of an activity (Higgins, 2000). Based on the same reasoning it is shown that when loss frames are matched with low-level construals and when gain frames are matched with high-level construals they become more effective (White, MacDonnell, & Dahl, 2011). Analogous to that, another study measured the chronic construal level of participants and asserted that people whose disposition is to construe objects at a high-level preferred a gain-framed alternative over a loss framed one. Equivalently, those with a low-level construal disposition prefer loss-framed alternative over gained framed one (Freitas, Salovey, Liberman, 2001).

Controlling Mental Construal

Prior studies operationalized mental construal by either through experimental manipulations or measures of individual differences. It is accepted that people have predispositions regarding their mental construal; hence several studies measured individual's level of mental construal through variations in action identification (Vallacher & Wegner, 1989). Behavior Identification Form is an instrument designed to measure differences in identifying behavior. It suggests that any behavior can be identified in basically two ways; a higher-level action or a lower-level action. Accordingly, participants' scores obtained from Behavior Identification Form constitute a prevalent measure of construals.

Another approach in measuring construal is based on the concept of categorization. It is indicated that abstract processing leads to focusing on central characteristics of an object, which is associated with higher-level features that are categorized at a comprehensive level (Smith & Trope, 2006). As a result, measure of

inclusiveness of categorization (Rosch, 1975) is generally employed to assess the degree of abstract thinking (e.g. Trope & Liberman, 2010).

In several other studies, texts written by participants are utilized as measures of mental construal (e.g. Alter & Oppenheimer, 2008; Fujita, Henderson, Eng, Trope, & Liberman, 2006). Judges blind to the purposes of the studies code texts in terms of abstractness of language. It is expected that participants with high-level construal use more abstract language compared to those with low-level construal (Semin & Smith, 1999). Coding schemas that are derived from Linguistic Categorization Model (Semin & Fiedler, 1988) are mainly employed to identify the nature of the coding units. Similar to that, the attribution style questionnaire (Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman, 1982) present a structured medium to code participants' descriptions of causes of a negative outcome scenario using abstract or concrete attribution values.

Even though people have some tendencies towards a certain type of construal, it is still possible to manipulate construal levels through the means of various priming tasks. One of the most common methods is manipulating people's psychological distance of objects or events. By asking participants to think of the experimental task to take place in near vs. distant future (Trope & Liberman, 2000; Khan, Zhu, & Kalra, 2011), close vs. far locations (Henderson, Fujita, Trope, & Liberman, 2006), for people who are similar vs. dissimilar to one-self (Liviatan, Trope, & Liberman, 2008a), and with high vs. low probability (Waslak, Trope, Liberman, & Alony (2006) construal levels are manipulated.

Another type of procedure uses elaboration tasks to prime one's mindset. For instance, in one study participants were provided with several event descriptions and asked for either the significance of the event or the concrete details of the event

corresponding to high-level and low-level construal, respectively (Trope & Liberman, 2000). Likewise, asking participants to think about "why" or "how" some activities are performed induced high-level construal and low-level construal, respectively (Freitas, Gollwitzer, & Trope, 2004; Liberman, Trope, McCrea, & Sherman, 2007; Torelli & Kaikati, 2009).

In addition to the direct manipulation of the mindset, a number of studies manipulated the construal level of the experimental stimuli. For instance, a study investigating the role of construal level in influencing consumer's recycling behavior utilized brochures as the construal manipulation, which emphasized either why people recycle or how they recycle (White, MacDonnel, & Dahl, 2011). Similarly, in advertising context, construal level was manipulated by emphasizing either why one should use the product or how one should use the product (Lee, Keller, & Sternthal, 2009). Furthermore, mere presence of target brands at the time of evaluation as opposed to making valuations solely based on brand name has been used as a proxy for construal manipulation (Kardes, Cronly, & Kim, 2006). It is argued that physically present objects possess contextual details; hence construed at lower-levels.

Research in Construal Levels and Preference Consistency

Several studies illustrated effects of mental construal on preferences. These studies mostly focused on preference reversals that are induced by construal effects. Mental construal, which determines the type of input entering evaluations and the power of this input in evaluation, causes individuals to shift their preferences. Therefore, research in this area mainly concentrated on distinguishing the effects of construal

levels and the type of attributes taken into consideration that produce preference reversals.

In one of the initial studies within construal research, Liberman and Trope (1998) found preference reversals between high desirability-low feasibility and low desirability-high feasibility options depending on the temporal distance. Participants preferred an interesting but inconveniently scheduled lecture to a boring but conveniently scheduled lecture when they imagined taking the lecture in distant future rather than in near future. Likewise, Thomas, Chadran, & Trope (2006) attained similar results, in which desirability aspects of an object had a stronger effect on purchase intentions for distant future and feasibility aspects of an object had a stronger effect on purchase intentions for near future. Time-dependent effects on gambling displayed equivalent results. It was shown that payoffs, which constitute the desirability aspects of a gamble, is weighted more heavily in distant gambles, whereas win-lose probabilities, which constitute the feasibility aspects of a gamble, is weighted more heavily in near future gambles (Sagristano, Trope, & Liberman, 2002).

A related strand of research revealed time construal effects on preference shifts between high-level versus low-level events (Trope & Liberman, 2000). Participants in the distant future condition indicated a stronger preference for high-level events such as writing a letter to parents or studying in the library than more low-level events such as eating a cake or your apartment being cleaned by your roommate. For the near future condition preference reversals occurred in the opposite direction.

Hamilton and Thompson (2007) examined the impact of varying degrees of experiential exposure on preferences. Direct and indirect product experiences were

used as proxies for different levels of mental construal. Participants who had direct experiences with the product were considered as the low-level construal condition since the personal interaction with the product induced a more concrete mental construal than solely reading product descriptions. Participants in abstract mental construal condition preferred desirable yet difficult to use music players rather than easy to use but less desirable alternatives, whereas for participants in the concrete mental construal condition, the reverse held true.

In addition to that, consumers' preference for assortment size is influenced by their psychological distance to target assortments (Goodman & Malkoc, 2012). However the nature of this effect varies depending on the processes consumers engaged in. For instance, when consumers engaged in an abstraction process as a result of increased psychological distance, their preference for a larger assortment weakened. They perceived the alternatives in the assortment similar at a distance; hence they considered a large assortment redundant. When they engaged in a process of weighing feasibility versus desirability aspects, their preferences for a larger assortment were strengthened at a distance. The desirability aspects of large assortments, such as increased variety, were more emphasized in comparison to feasibility aspects of large assortments, such as choice difficulty, at a distance.

A bunch of empirical studies investigated the impact of construal on the direction of preference reversals; yet only few scrutinized the effects of mental construal on preference consistency. Kardes, Cronley, and Kim (2006) investigated the effects of sensory distance on preference stability. Showing different brands of candy bars constituted the mere presence condition, which denoted low-level construals and providing just the brand names constituted the no presence condition, which denoted high-level construals. It was shown that stability of preferences

increased in low-level construals as vividness and concrete details of the experimental stimuli ease preference formation process.

A further study focused on the influence of construal level on context effects (Khan, Zhu, & Kalra, 2011). It is demonstrated that context dependent trade-offs are significantly affected by the mental representations of the choices. Specifically, experiments with three common context effects, namely the compromise, the background-contrast, and the attraction effect showed decreased number of trade-offs with abstract mindsets compared to concrete mindsets. In other words, context based preference reversals are reduced with abstract mindsets.

CHAPTER 3

HYPOTHESES

A number of studies tested the impact of mental construal on preference consistency as disclosed in the previous section. However most of them concentrated on the influence of mental construal on the weights of attributes in evaluations (Lynch & Zauberman, 2007). Only few studies examined how mental construal influences preference stability and these studies presented conflicting results. Kardes, Cronley, and Kim (2006) suggested that preference formed on the basis of lower level construals should be more stable over time. It is indicated that since large amount of contextual detail create greater confidence in judgments (Gill, Swann, & Silvera, 1998), and preferences made based on contextual details are more resistant to persuasion (Kalgren, & Wood, 1986), a concrete mental representation of objects should produce more consistent preferences.

Contrary to that, Khan, Zhu, and Kalra (2011) demonstrated increased consistency, in the form of less trade-offs with abstract mental construals relative to concrete mental construals. It is suggested that high-level construals shift attention away from direct comparisons between attributes; thus shield preferences from contextual effects. On the other hand, concrete mindsets focus on comparative trade-offs and result in altered preferences.

In this study, it is expected that consistency of preferences increase when decisions are made with an abstract mindset instead of a concrete mindset. It is stated that high-level mental representations are more coherent than low-level mental representations (Liberman, Sagristano, & Trope, 2002). Furthermore, it is suggested that high-level mental representations reflect central features and omit incidental

features. At a close distance representations highlight contextual details, yet as distance increases, representations convey the substance of the target object. These high-level features enable general evaluations that encapsulate constant aspects of a target object across multiple context, thus preferences will become more stable (Ledgerwood, Waslak, & Wang, 2010). Therefore;

H1: Preferences will be more consistent when people adopt high-level mental construals than when they adopt low-level mental construals.

The following hypothesis is related to matching of construal levels at different points of time. Within the literature, construals were mainly manipulated between subjects rather than examined longitudinally within subjects (Lynch & Zauberman, 2007). Nevertheless, repeated measures might present novel findings for construal studies.

It is suggested that evaluations would be more stable over time when construal levels at two points in time are similar (Kardes, Cronley, & Kim, 2006). The main reasoning for this assertion is that same cues will be discernable at choice and retrieval. In particular, when individuals adopt a high-level mental construal at both instances of evaluation, they focus on same characteristics namely, core, superordinate features, desirability aspects and pros. Consequently, their preferences will be consistent. On the other hand, if they adopt a low-level mental construal at the second evaluation, after adopting a high-level mental construal at the initial evaluation, this time they focus on different characteristics namely, peripheral, subordinate features, feasibility aspects and cons. Consequently, their preferences will be inconsistent. As a result, it is suggested that preferences will be more consistent when the levels of mental construal at two points in time are similar than

when they are different. In other words, when the level of construal of the first evaluation matches that of second, preferences will be more consistent. In particular;

H2a: For those in high-level construal condition during the first evaluation, preferences will be more consistent if they will be in the high-level construal condition during the second evaluation rather than the low-level construal condition.

H2b: For those in low-level construal condition during the first evaluation, preferences will be more consistent if they will be in the low-level construal condition during the second evaluation rather than the high-level construal condition.

CHAPTER 4

RESEARCH METHODOLOGY

In order to test aforementioned hypotheses an experimental study was conducted. The main objective of this study was to examine the impact of mental construal on preference consistency. In addition to that analyses to investigate construal effects on fluency, choice confidence and purchase intention were made.

Participants and Design

The study took place at two major Istanbul Universities in groups ranging from six to thirty-three people. Since the study was a longitudinal study with two sessions, the responses of only those who participated in both sessions were analyzed. Of the two hundred and thirty five who participated in the first part of the study, one hundred and seventy two subjects attended the second part (%73.2). Fourteen responses were eliminated since subjects did not accurately follow the instructions of the experiment. The final sample consisted of one hundred and fifty eight students.

Within the sample, ages ranged from 19 to 35 years ($\bar{X}$ = 23.38) with 49.4% female participants. Majority of the respondents (86.1%) were undergraduate students. Among those in the sample only 3.8% were married. Subjects were not informed about the purposes of the study and as an incentive they were given extra course credits to participate.

A 2 mental construal at t1 (high vs. low) x 2 mental construal at t2 (high vs. low) x 5 (product category: mobile phone, laptop computer, tablet, digital camera, and e-reader) mixed design was employed (See Appendix I). Product category was

manipulated within subjects and mental construal at both sessions was manipulated between subjects. Participants were randomly assigned to one of the four experimental conditions.

Stimuli Development

Several electronic products, namely mobile phone, laptop computer, tablet, digital camera, and e-reader, were selected as stimulus material. They were considered appropriate for this study since they possess various numbers of attributes that the participants were expected to be familiar with. For all product categories eight product features were provided. Some of the features were primary features while others were secondary. A brief statement of product description, indicating the core benefit or essential characteristics, was mentioned as well. Furthermore, customer ratings for ease of use and perceived value, specifically price-quality ratio, were presented on a five-point scale. Ease of use represented feasibility aspect of the products while perceived value represented desirability aspect of the products (See Appendix J for an example of the experimental stimuli).

Experimental Procedure

The study was conducted in two sessions (Appendix K). The sessions were at least one week apart. Participants were informed that they would be attending two consecutive studies; hence they were required to write down a four-digit code on both questionnaires that they could easily remember so that the separate questionnaires could be put together.

Participants evaluated two models of each product category in every session. However only one set of models was common at both sessions. The other sets were placed to disguise the purpose of the study and prevent memory effects. The analysis utilized the ratings of the five common stimuli that were used in both sessions.

In the first session, participants were given two booklets, one containing the questionnaire and the other containing the product descriptions. There were five product categories and for each category two models were presented. Initially participants completed a thought exercise for the mental construal manipulation task (Hamilton & Thompson, 2007; Freitas, Gollwitzer, &Trope, 2004). They were asked to focus and elaborate on "improving and maintaining health" activity for this exercise (Appendix L).

Those in the abstract mental construal condition first read a passage, which explained why people do things, they do. The text described that a higher-level reason exists for every action and they all can be related to one's ultimate life goals. Next, they were asked to provide three reasons for engaging in "improving and maintaining health" activity and rate the importance of each given reason. Following that they were asked to complete a diagram in which they came up with successive higher-level reasons for "improving and maintaining health"; hence thought progressively abstractly about the activity.

Those in the concrete mental construal condition read another passage, which explained how people do things, they do. The text described that one' ultimate life goals can be expressed through specific behaviors. Next, they were asked to mention three actions to reach "improving and maintaining health" goal and rate the importance of each given action. Following that they were asked to complete a diagram in which they came up with successive lower-level means for "improving

and maintaining health" goal; hence thought progressively concretely about the activity.

In the next part, respondents were instructed to examine the product descriptions and evaluate the products. Afterwards, they completed the questionnaire that comprise of dependent and independent measures. Moreover, they responded to a set of items functioning as a manipulation check for mental construal. Finally, demographic information was inquired.

In the second session of the study, participants were again given two booklets, one containing the questionnaire and the other containing the product descriptions. There were again five product categories and for each category two models in the second booklet. One set of models, the focus of analysis, was the same as the one used in the first study whereas a different set of models replaced the second set.

A different mental construal manipulation task was used for this session (Liberman, Trope, McCrea, & Sherman, 2007). Participants were informed that the study was about story building with the intention to investigate how people interpret and form impressions of different events. They were instructed to visualize each event and respond to following questions. Same six brief descriptions of actions were presented to participants in both conditions. Participants in the abstract mental construal condition were asked *why* the events could have happened, whereas those in the concrete mental construal condition were asked *how* the events could have happened (Appendix M).

In the next part, respondents were instructed to examine the product descriptions and evaluate the products. Afterwards, they completed the questionnaire

that comprise of dependent and independent measures. Moreover, they responded to a different set of manipulation check items to avoid memory effects.

Measures

Preference Inconsistency

The main dependent variable for this study was preference inconsistency. Participants evaluated product alternatives on a fifteen-point scale ranged from 1 (very negative) to 15 (very positive). Preference inconsistency was measured as the absolute difference between the ratings of the first and the second sessions. A score of zero indicated totally consistent preferences whereas a score of fourteen indicated totally inconsistent preferences (See Appendix N).

Confidence in Evaluation

For each of the twelve evaluations made in both sessions participants' confidence in their evaluation was assessed by asking respondents "How confident are you with your evaluation" using a scale ranging from 1 (not confident at all) to 7 (extremely confident).

Purchase Intention

Purchase intention was assessed using Maheswaran and Sternthal's (1990) one item scale: "If you were to buy an item from this product category, how likely is that you

would choose this alternative?". Responses ranged from 1 (not likely at all) to 7 (extremely likely).

Fluency

Fluency construct, was measured by asking respondents "How would you describe your process of evaluating the product alternatives?". A 3-item semantic differential scale adopted from Kramer and Kim (2007) was employed. Participants were asked to describe to process of evaluating the products. Items included very simple (1) versus very complicated (7), effortful to read (1) versus. effortless to read (7), difficult to process (1) versus easy to process (7). Fluency scale was employed at both sessions of the study. Cronbach's alpha estimate of the scale was .807 and .795 for the first and the second session respectively.

Involvement

The level of involvement in purchase decision was measured by asking respondents "How important would it be to you to make a right choice of this product?" using a scale ranging from 1 (not important at all) to 7 (very important). Involvement was measured for the five product categories solely in the first session.

Familiarity

Familiarity was assessed by asking respondents " How familiar are you with this product category?" using a scale ranging from 1 (not familiar at all) to 7 (very

familiar). Familiarity was measured for the five product categories solely in the first session.

Knowledge

Knowledge was also assessed using a self-report measure. Participants stated the extent they agreed with the following statement: "For this product category, I have enough knowledge to understand all of the given information" using a scale ranging from 1 (completely disagree) to 7 (completely agree). Knowledge was measured for the five product categories solely in the second session.

Recall

Participants' recall of their evaluations in the first session of the study was assessed for each product separately. Participants responded to "For the product categories mentioned below, to what extent can you recall the evaluations you made in the first session of this study?" using a scale ranging from 1 (can not remember at all) to 7 (remember very well). Recall was also measured for the five product categories solely in the second session.

Behavioral Identification Form

In order to ensure that the manipulation was made successfully Behavior Identification Form (Vallacher & Wegner, 1989) was used. The BIF is an instrument that measures people's construal level. It consists of 25 actions along with one high

level and one low level way of identifying each one of those actions. For instance, for “locking a door”, respondents could choose either “putting the key in the lock” which is the low-level alternative or “securing the house” which is the high-level alternative.

A shorter version of the BIF was employed in this study, which consists of ten items randomly selected from the entire set of items (Tsai & Mcgill, 2011). Ten items were selected to form the scale for the first session of the study. Following that another ten items were selected from the remaining items for the second session of the study in order to avoid any memory effects. As a result two BIF scales were employed for the study (See Appendix O for a list of the items).

When a low-level identification is chosen for an action, it was coded as 0, and when high-level identification is chosen for an action, it was coded as 1. A BIF score for participants were computed by adding the number of higher-level alternatives chosen. Higher overall scores represented higher-level construal and more abstract mindsets, whereas lower overall scores represented lower-level construal and concrete mindsets. The results obtained from this scale demonstrated whether the experimental manipulations induced the intended effect.

CHAPTER 5

DATA ANALYSES AND RESULTS

Prior to testing the hypotheses, all variables were checked for normality in terms of distribution. Skewness and kurtosis values of all variables were analyzed and they were within acceptable ranges for the majority of the variables. Only confidence in evaluation for tablet at T1, mobile phone at T2, and camera at T1 and T2 violated the assumptions. Following that the assumption of homogeneity of variance is tested using Levene test and results showed equal variances for most variables. The consistency variables for mobile phone and camera do not have similar variances ($F_{3,154} = 4.576$, $p = .004$; $F_{3,154} = 4.223$, $p = .007$). However there were more than thirty-five participants in each condition and number of participants was almost equal across the groups. Hence, ANOVA tests were considered to be robust.

During data entry, a measurement problem related to purchase intention variable is detected. For each product category, purchase intention is assessed following product evaluations and confidence in evaluation. Products evaluations are measured using a fifteen-point scale, and confidence and purchase intention are measured using a seven-point scale. The ratings given to choice confidence and purchase intention were the same for a number of participants. Even when respondents evaluated an item poorly, if they were confident about this evaluation they indicated high purchase intentions. This pattern of responses is observed for a considerable amount of participants; hence purchase intention variable is removed from analyses.

Manipulation Checks

Participants' construal levels at both sessions were manipulated in this study, as previously explained. In order to ensure that the manipulations were successful participants responded to different 10-items of Behavioral Identification Form (See Appendix O for the percentages of high-level action identifications selected for session one and two in).

For the first session of the study, the mental construal manipulation influenced subjects' level of action identification with a marginal significance. Participants in the high-level construal condition chose more high-level action identifications ($\bar{X}$ = 6.696) than those in the low-level construal condition ($\bar{X}$ = 6.177) ($F_{1,156} = 2.774$, $p = .097$).

For the second session a similar pattern was also observed. Participants in the high-level construal condition chose more high-level action identifications ($\bar{X}$ = 6.283) than those in the low-level construal condition ($\bar{X}$ = 5.948), yet this effect was not significant ($F_{1,156} = .722$, $p > .10$).

Following that a Chi-square statistic was calculated to determine whether the amount of high-level identifications selected relate to subjects' construal levels. For the first session construal manipulation significantly affected total number of high-level identifications selected across conditions ($\chi^2(1) = 3.327$, $p < .05$). For the second session construal manipulation affected total number of high-level identifications selected across conditions with a marginal significance ($\chi^2(1) = 2.496$, $p = .063$). The Chi-square results indicate that the pattern of responses, namely the

proportion of high-level action identifications selected to low-level action identifications selected in the two construal level conditions is different.

Hypotheses Testing

Initially, a 2 construal at T1 x 2 construal at T2 x 5 product category mixed design ANOVA is conducted to examine the overall effects of construal on preference consistency with different product categories (See Appendix P for the means and standard deviations for preference consistency).

The analysis revealed a significant main effect of product type on preference consistency ($F_{4,150} = 7.483$, $p = .000$, partial $\eta 2 = .166$) indicating a change of consistency levels across product categories. The interaction effect of construal level at T1 and product type was also significant ($F_{4,150} = 7.483$, $p = .000$, partial $\eta 2 = .166$). Other than that the interaction between construal level at T2 and product type ($F_{4,150} = 1.045$, $p > .10$, partial $\eta 2 = .027$) and triple interaction among product type, T1 and T2 construal levels ($F_{4,150} = .200$, $p > .10$, partial $\eta 2 = .005$) were not significant.

Tests of between subject effects revealed a significant main effect of construal level at T1 ($F_{1,153} = 5.057$, $p = .026$, partial $\eta 2 = .032$)(Table 10). This indicates that participants, who were in the high-level construal condition at T1, were more consistent in their evaluations regardless of their construal mindset at T2 of the study. A similar kind of effect is observed for the main effect of construal level at T2, yet it was not significant ($F_{1,153} = 2.737$, $p = .10$, partial $\eta 2 = .018$). The interaction between construal levels at T1 and T2 was also significant ($F_{1,153} = 6.324$, $p = .013$, partial $\eta 2 = .040$) (Figure 2). This indicates that the consistency of

preferences for different construal levels at T1 differed according to the construal levels at T2.

Table 10. Repeated Measures ANOVA for Inconsistency

	df	F	Sig.	Partial η2
Product category	4,612	8.905	.000	.055
Product category * T1_construal	4,612	0.884	.473	.006
Product category * T2_construal	4,612	3.423	.009	.022
Product category * T1_construal * T2_construal	4,612	0.209	.933	.001
T1_construal	1,153	5.057	.026	.032
T2_construal	1,153	2.737	.100	.018
T1_construal * T2_construal	1,153	6.324	.013	.040

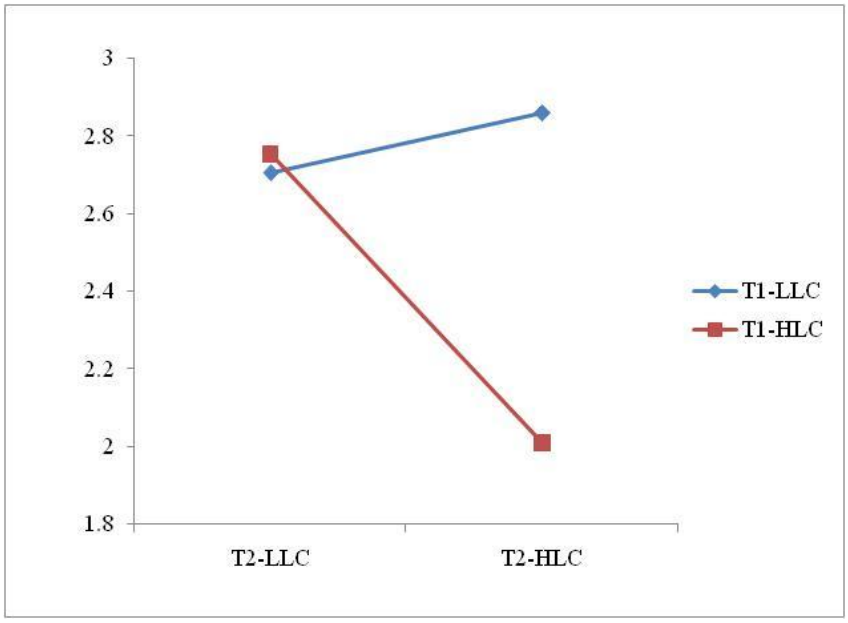


Figure 2. The interaction between construal levels at T1 and T2

To break down this interaction, planned contrasts were performed comparing consistency levels for varying construal levels at T1 and T2. In hypothesis1 it was expected that high-level construals would be more consistent than low-level construals. As expected, the degree of inconsistency was lower for participants, who were in high-level construal conditions for both sessions ($\bar{X}$ = 2.010) compared to those, who were in low-level construal conditions for both sessions ($\bar{X}$ = 2.705) ($t(53.05) = -3.276$, $p < .001$). Therefore, hypothesis 1 was supported.

Table 11. Planned Contrasts for Hypothesis 1

First Session Construal	Second Session Construal	t	df	p	Mean Inconsistency Estimate
High	High	-3.276	53.05	.0009	2.010
Low	Low				2.705

In the second hypothesis, it was expected that when the levels of mental construal at two points in time are similar preferences would be more consistent than when they are different. Planned contrasts revealed that having a matching high-level construal rather than a non-matching low-level construal after having high-level construal significantly decreased the level of inconsistency ($t(51.99) = -3.394$, $p < .001$). Therefore, hypothesis 2a was supported.

Similarly, having a matching low-level construal rather than a non-matching high-level construal after having low-level construal decreased the level of inconsistency, yet this effect was not significant ($t(76.9) = -.544$, $p > .10$). Therefore, hypothesis 2b was not supported.

Table 12. Planned Contrasts for Hypothesis 2

First Session Construal	Second Session Construal	t	df	p	Mean Inconsistency Estimate
High	High	-3.394	51.99	.0007	2.010
High	Low				2.753
Low	Low	-.544	76.9	.2941	2.705
Low	High				2.859

Next, univariate analyses were conducted for each product category. Before conducting the ANOVAs participants' level of involvement, familiarity, and knowledge for all product categories were examined. The level of involvement was highest for laptops and lowest for e-readers. Participants were most familiar with laptops and mobile phones and they were least familiar with e-readers. Similarly, extent of knowledge was highest for laptops and mobile phones and it was also lowest for e-readers.

Table 13. Means and Standard Deviations for Involvement, Familiarity, and Knowledge Across Product Categories

	Laptop	Mobile phone	Tablet	Camera	E_reader
Involvement	6.57	6.29	5.62	5.53	3.72
	(.95)	(1.16)	(1.57)	(1.39)	(2.02)
Familiarity	6.32	6.29	4.59	5.06	2.96
	(1.04)	(1.01)	(1.84)	(1.70)	(1.85)
Knowledge	5.50	5.71	4.75	4.81	3.67
	(1.40)	(1.20)	(1.56)	(1.58)	(1.89)

Note. Number without parentheses refers to means; number with parentheses refers to standard deviations

Next, 2 (construal at T1) x 2 (construal at T2) ANOVAs were employed for the product categories. The covariates, familiarity, knowledge, involvement, and recall had no effect; hence removed from analysis. For the mobile phone, the main effect of construal at T1 ($F_{1,154} = .009$, $p > .10$), the main effect of construal at T2 ($F_{1,154} = .951$, $p > .10$), and the interaction effect of construal levels at T1 and T2 ($F_{1,154} = 1.526$, $p > .10$) on preference consistency were not significant. For the laptop, the main effect of construal at t1 ($F_{1,154} = 5.090$, $p = .025$), and the main effect of construal at T2 ($F_{1,154} = 6.908$, $p = .009$) were significant indicating decreased inconsistency for higher construal levels ($\bar{X}_{HLC} = 2.279$ vs. $\bar{X}_{LLC} = 3.013$) and ($\bar{X}_{HLC} = 2.235$ vs. $\bar{X}_{LLC} = 3.078$) respectively. The interaction effect of construal levels at T1 and T2 ($F_{1,154} = 2.589$, $p > .10$) was not significant. For the tablet, only the main effect of construal at t2 ($F_{1,151} = 7.485$, $p = .007$) was significant indicating decreased inconsistency for higher construal levels ($\bar{X}_{HLC} = 2.450$ vs. $\bar{X}_{LLC} = 3.329$). The main effect of construal at t1 ($F_{1,151} = 1.039$, $p > .10$) and the interaction effect of construal levels at T1 and T2 ($F_{1,151} = 1.404$, $p > .10$) were not significant. For the e-reader, the main effect of construal at T1 ($F_{1,154} = .471$, $p > .10$), the main effect of construal at t2 ($F_{1,154} = .134$, $p > .10$), and the interaction effect of construal levels at T1 and T2 ($F_{1,154} = .659$, $p > .10$) were not significant. Finally for the digital camera, the main effect of construal at T1 ($F_{1,154} = 4.484$, $p = .036$) was significant indicating decreased inconsistency for higher construal levels ($\bar{X}_{HLC} = 1.557$ vs. $\bar{X}_{LLC} = 2.266$). Also, the interaction effect of construal levels at T1 and T2 ($F_{1,154} = 4.502$, $p = .035$) was significant. The main effect of construal at T2 ($F_{1,154} = .060$, $p > .10$) was not significant.

Following that, the same planned contrasts that were utilized to test the hypotheses were run for each product category separately (Table 14). For laptop,

tablet and digital camera results were parallel to overall analysis. For the mobile phone category, the findings were also similar with one exception. The high-level construals created less inconsistency than low-level construals again, yet this effect was not significant. For the e-reader, on the other hand, completely opposite results were observed. The difference of preference inconsistency between high-level construal condition at both T1 and T2 and low-level construal condition at both T1 and T2 was not significant. Moreover, the difference between low-level construal condition at both T1 and T2 and low-level construal condition at T1 followed by a high-level construal condition at T2 was marginally significant.

Table 14. Summary of Planned Contrasts for the Product Categories

Product Category	Contrast Groups (T1-T2 Construal)		t	p	Mean Inconsistencies	
Digital camera	High-High	Low-Low	-1.854	**	1.175	1.949
	High-High	High-Low	-2.087	**	1.175	1.947
	Low-Low	Low-High	-1.135	n.s.	1.949	2.561
Laptop	High-High	Low-Low	-3.432	***	1.600	3.184
	High-High	High-Low	-2.997	***	1.600	2.974
	Low-Low	Low-High	.720	n.s.	3.184	2.854
Tablet	High-High	Low-Low	-2.355	***	2.150	3.342
	High-High	High-Low	-2.303	**	2.150	3.316
	Low-Low	Low-High	1.213	n.s.	3.342	2.732
Mobile Phone	High-High	Low-Low	-0.682	n.s.	1.900	2.184
	High-High	High-Low	-1.556	*	1.900	2.615
	Low-Low	Low-High	-.182	n.s.	2.184	2.268
E-reader	High-High	Low-Low	.575	n.s.	3.225	2.868
	High-High	High-Low	.490	n.s.	3.225	2.932
	Low-Low	Low-High	-1.638	*	2.868	3.878

Note. * $p < .10$, ** $p < .05$, *** $p < .01$

Additional Analyses

Fluency

In addition to the hypothesized relationships, the impact of varying degrees of construal on fluency was also investigated. Initially the construal-fluency relation was examined for the first session of the study using univariate ANOVA. The construal level had a significant main effect on fluency ($F_{1,156} = 10.319$, $p = .002$, partial $\eta 2 = .062$). Participants in the high-level construal condition had less fluency ($\bar{X} = 4.042$) than those in the low-level construal condition ($\bar{X} = 4.734$). On the other hand, for the second part of the study the main effect of construal level on fluency was not significant ($F_{1,154} = .140$, $p > .10$, partial $\eta 2 = .001$).

Table 15. Construal Effects on Fluency for T1 and T2

	df	F	p	Partial η2
Construal at T1	1,156	10.319	***	0.062
Construal at T2	1,154	0.14	n.s.	0.001

Note. * p < .10, ** p < .05, *** p < .01

Following that a 2 session x 4 construal, repeated measures ANOVA was conducted using the two sessions as a within subjects factor and the construal level as between subjects factor. The main effect of session was not significant ($F_{1,152} = 2.01$, $p > .10$, partial $\eta 2 = .013$) indicating that fluency experiences did not differ between the two session ($\bar{X}_{t1} = 4.387$ vs. $\bar{X}_{t2} = 4.216$). The interaction effect between session and construal levels was marginally significant indicating that for different levels of construal, fluency ratings changed from session one to session two ($F_{3,152} = 2.63$, $p = .053$, partial $\eta 2 = .049$). In order to analyze this interaction post

hoc analyses (Tukey) were performed. The only marginally significant difference was observed when the construal levels at two points did not match (p = .075). Specifically, fluency experienced when low-level construal condition was followed by a high-level one was higher than fluency experienced when high-level construal condition was followed by a low-level session ($\bar{X}_{t1low\text{-}t2high}$ = 4.638 vs. $\bar{X}_{t1high\text{-}t2low}$ = 4.000).

Table 16. Repeated Measures ANOVA for Fluency

	df	F	Sig.	Partial η2
Session	1,152	2.01	n.s.	.013
Session * Construal group	3,152	2.613	*	.049
Construal group	3,152	2.26	*	.043

Note. * p < .10, ** p < .05, *** p < .01

Confidence

First, the relationship between construal level and confidence was examined. A series of oneway ANOVAs revealed no significant difference of construal on choice confidence for all the product categories except for the e-reader. Participants in the high-level construal condition were more confident in their evaluations ($\bar{X}$ = 5.911) than those in the low-level construal condition ($\bar{X}$ = 5.493) ($F_{1,156}$ = 4.369, p = .038, partial η2 = .027).

Next, the differences of confidence in evaluations between T1 and T2 were computed for all product categories. A 5 product x 4 construal repeated measures ANOVA on change of confidence revealed no significant main effect of construal level ($F_{3,150}$ =.239, p > .10, partial η2 = .005).

The nature of relationship between confidence and fluency was explored using a 5 product category x 2 fluency repeated measures ANOVA. Product category was the within subject factor and the fluency was the between subject factor. For both sessions fluency experiences were coded as 0 (not fluent) and 1(very fluent) based on median splits (Mdn_{t1} = 4.33, Mdn_{t2} = 4.00). Analysis of the first session of the study revealed a significant main effect of product category on confidence ($F_{4,150}$ = 3.960, p = .004, partial η2 = .096) indicating a change of confidence levels across product categories. Furthermore, a marginally significant effect of fluency was observed ($F_{1,153}$ = 3.368, p = .068, partial η2 = .022) indicating that participants who experienced less fluency were less confident ($\bar{X}$ = 5.533) than those who experienced more fluency in evaluations ($\bar{X}$ = 5.800). Analysis of the second session of the study similary revealed a significant main effect of product category on confidence ($F_{4,152}$ = 5.496, p = .000, partial η2 = .126) indicating a change of confidence levels across product categories. In addition to that, a significant effect of fluency was also observed ($F_{1,155}$ = 7.263, p = .008, partial η2 = .045) indicating that participants who experienced less fluency were less confident ($\bar{X}$ = 5.262) than those who experienced more fluency in evaluations ($\bar{X}$ = 5.641).

Table 17. Repeated Measures ANOVA for Confidence

Session 1	df	F	Sig.	Partial η2
Product category	4, 612	4.509	***	.029
Product category * Fluency	4, 612	0.868	*	.006
Fluency	1, 153	3.368	n.s.	.022
Session 2				
Product category	4, 620	5.108	***	.032
Product category * Fluency	4, 620	1.25	n.s.	.008
Fluency	1, 155	7.263	***	.045

Note. * p < .10, ** p < .05, *** p < .01

CHAPTER 6

DISCUSSIONS, IMPLICATIONS, LIMITATIONS, AND DIRECTIONS FOR FUTURE RESEARCH

Discussions

Preference Consistency

This study provides support for the hypothesis that consumers with high-level construals are more consistent in their evaluations than consumers with low-level construals. It is our prediction that abstract construal increases focus on the overall attractiveness of the objects and the primary features during evaluations. On the other hand, concrete construal highlights incidental aspects and peripheral features during evaluations. With abstract representation consumers see the big picture and form global evaluations that remain intact. On the other hand, with concrete representations consumers turn their attention to incidental aspects and stray into the jungle of details; hence these evaluations are not as stable.

An exception to this finding is observed for a low involvement, low knowledge product category. For such a product, preferences are more consistent when consumers adopt a low-level mental construal than when they adopt a high-level mental construal. One possible explanation for this result is that, with abstract representations concrete aspects of objects become vague and evaluations are made mostly based on information previously stored in memory (Bar-Anan, Liberman, & Trope, 2006). Consumers, who are not much knowledgeable about a product category, find it more difficult to form general evaluations since they do not have

sufficient prior knowledge structures (Bettman & Park 1980). They cannot identify relevant and important information instead they base their decisions on easily understandable features (Alba & Hutchinson, 1987). As a result evaluations based on abstract representation lack a solid foundation and become unstable. On the other hand, evaluations based on concrete representations use heuristic cues that can be easily retrieved in following evaluations; hence relatively be more stable.

Another important finding of the present study is that matching construals at two points at time produce more consistent preferences than non-matching construals. This pattern exists both for high-level construals and low-level construals at two points at time, yet statistically significant only for high-level construals. It is our prediction that with matching mental construals, consumers focus on similar aspects of the objects and consequently evaluations are more consistent. Specifically, participants that are in high-level construal condition at both sessions give more weight to same primary features, superordinate goals, and desirability concerns; therefore their evaluations at two sessions are similar. Contrary to that, participants that are in high-level construal condition in the first and low-level construal condition in the second session gave different weights to product attributes due to non-matching mental representations; therefore their evaluations are not as consistent. However, only for high-level construals the matching hypothesis was significant. One probable account for lack of significance with low-level construals is that with a high-level construal, consumers initially see the abstract representation and following that with a low-level construal they form their evaluations on concrete details that they did not pay attention to beforehand so they cannot be consistent whereas with a low-level construal, consumers initially construe concrete representations with an awareness of the details and following that with a high-level

construal it is not as difficult to form global evaluations. Consequently, evaluations might not differ as much for low-level construals compared to high-level construals. Another factor that played a part is that even for the matching case, consistency of evaluations for concrete construals is low. For that reason it is possible that although the non-matching case creates a decrease in consistency compared to the matching case, the difference is slim and not significant.

Once more, an exception to this result is discerned for a low involvement, low knowledge product category. It is seen that for the e-reader the matching hypothesis is significant for low-level construals and not significant for high-level construals. It is established that consumers are most consistent with low-level mental construals at both sessions since they use concrete details as heuristic cues for retrieval of prior evaluations. In contrast when a low-level construal is followed by a high-level (non-matching) construal, the focus of attention shifts from the concrete details to the global aspects; in which case heuristics cannot be employed. As a result consistency is reduced.

Fluency

Analyses exploring the relationship between fluency and construal reveal that participants in the high-level mental construal condition had less fluency during evaluations compared to those in the low-level mental construal condition. Consumers with a low-level mental construal represent objects concretely in their minds; hence they focus on the tangible and visible aspects, peripheral, even incidental features. Thus their experience of fluency, which is associated with high clarity (Schwarz, 2004), is relatively high. On the other hand consumers with a high-

level mental construal represent objects abstractly in their minds, which lack clarity; hence they experience less fluency. This result also supports and complements Alter and Oppenheimer (2008)'s findings, which corroborated that cognitive disfluency induces more abstract construal than cognitive fluency. In our study it is shown that the reverse holds true as well. Consequently, it might be deduced that the metacognitive experience of ease or difficulty of cognitive processes is associated with mental construal in a bidirectional manner.

Confidence

The analyses examining construal effects on confidence do not show significant results except for the e-reader product category. The results for this product category show that consumers who engage in abstract mental construal are more confident in their evaluations compared to consumers who engage in concrete mental construal. The e-reader is the product category that participants of this study are least knowledgeable about and least involved with; hence the fact that the relationship between mental construal and confidence is meaningful only for this product is intriguing. It seems that consumers do not feel comfortable construing products that they are unfamiliar with in a concrete manner as they are inexperienced in the incidental details of the product. On the other hand they feel more confident if they construe these products in an abstract manner since the principal features are relatively less unknown.

Following that analyses exploring the relationship between fluency and confidence are made. The findings of these analyses show that consumers who experienced less fluency are less confident with their evaluations than those who

experienced more fluency. Prior studies demonstrate varying results in this vein such that some indicate reduced confidence due to disfluency (e.g. Alter, Oppenheimer, Epley, & Eyre, 2007) and some indicate improved confidence as a result of disfluency (e.g. Tsai & McGill, 2011). The present study also supports that disfluency weakens confidence. It is possible that those who experience disfluency feel incompetent as a result of the difficulty of the process; hence their confidence decreased. Likewise, those who experience fluency feel capable as a result of the ease of the process and consequently their confidence increased.

Theoretical and Practical Implications

One of the main theoretical contributions of this research to the literature of construal effects on preference consistency is demonstrating that high-level mental construal generates more consistent preferences compared to low-level mental construals. Even though a considerable amount of studies investigated the impact of mental construal on preference reversals, the prior literature is stunt regarding research on construal effects on preference consistency. Moreover, even the limited number of studies provides conflicting results. Consequently, this finding makes an important contribution to consumer research on mental construal and consistency.

Another important contribution of the present study is made through the use of a longitudinal design. This study has been the first to employ such a methodological approach within this stream of research to the best of our knowledge. The operationalization of consistency with a temporal angle makes it possible to investigate the impact of matching and non-matching construals on evaluations.

Furthermore, this study employs a number of different products as experimental stimuli. Therefore, the findings of the present study are not restricted to a particular item; rather evidence from different product categories corroborates each other. Besides, usage of products that the participants were unfamiliar, not involved with and not knowledgeable about put forward different effects of construal on consistency while opening the door for future research for further developments.

One major practical implication for the consumers is to gain an understanding that mental construal can be used to influence consistency of one's preferences. Once the type of mindset that creates greater consistency is known, consumers can advance methods that will enable them to become more consistent. Moreover, consumers can be more aware of the marketing efforts that attempt to influence the stability of their evaluations.

Furthermore, this study provides some implications for marketing practitioners. Market leader, who primarily seek longevity and loyalty, should try to further consistency by promoting the high-level aspects of the offerings and inducing abstract mindsets through the marketing communications. They might be better off providing abstract representation of the products, emphasizing the general appeal, benefit of using the product. On the other hand, market followers should try to prompt shifts in preferences by providing a concrete representation. They might be better off emphasizing the peripheral features and feasibility aspects of the offering.

Limitations and Future Research

This study did not manipulate involvement or knowledge related to a given product category. However the findings suggest an impactful role of knowledge, involvement

and familiarity on the relationship between mental construal and preference consistency. Therefore it remains for future research to control for the influence of product category knowledge, involvement and familiarity on construal-consistency relationship.

Another important area for future research is the underlying mechanism that cause greater consistency with abstract construal compared to concrete construal. This study established that consistency improves with abstract construal yet discovering the process through which mental representations influence the evaluations is for further research.

Moreover, this study includes tasks with high cognitive demands. It is suggested that changes in mental construal might enhance or reduce task performance based on the compatibility between mental construal and task characteristics (Förster, Liberman, & Friedman, 2004). Accordingly, even though the results of this study supports most of our predictions, testing same hypotheses using tasks that are cognitively less demanding might provide stimulating results due to the interaction between task characteristic and mental construal.

GENERAL DISCUSSION

Within this dissertation two experimental studies were conducted to examine the role of two cognitive theories in influencing preference consistency, choice confidence, purchase intention, and processing fluency. The main aim of the studies was to contribute to related streams of research within consumer behavior literature and provide implications for both the consumers and the marketing practitioners.

The first study revealed that consumers in the affective format condition have more consistent preferences than those in the analytical format condition. Furthermore, a significant effect of thinking style and task format was observed on the degree of consensus of preferences but the direction was opposite to what had been expected. Participants in the rational thinking condition had more interpersonal agreement on evaluations of the products compared to those in the experiential thinking condition. Likewise, degree of consensus among consumers in analytical format condition was higher than degree of consensus among consumers in affective format condition. Moreover, the study confirmed that as consumers spent more time in evaluation, they become more inconsistent.

Apart from consistency, the relationship between fluency, choice confidence, and purchase intention were explored. As predicted thinking style and format had an effect on fluency, such that experiential thinking induced a more fluent evaluation process compared to rational thinking and affective format generated a more fluent evaluation process compared to analytical format. Even though there weren't any direct effects of thinking style and format on choice confidence and purchase intention, fluency, which was significantly influenced by the thinking style and the format affected choice confidence and purchase intention indicating an indirect effect.

In the second study, construal level theory was tested for its association with preference consistency. Findings revealed that consumers with high-level construals are more consistent in their evaluations than consumers with low-level construals. Another important finding of the present study is that matching high-level construals at two points at time produce more consistent preferences than non-matching construals. Even though the overall analysis pointed these findings, seperate examination of product categories showed that the reverse held true for the product category that the participants were least involved and familiar with.

Additionally, analyses examining the relationship between fluency and construal demonstrated that participants in the high-level mental construal condition had less fluency during evaluations compared to those in the low-level mental construal condition. For confidence, mental construal did not create any significant changes except for the product category that the participants were least involved and familiar with. The results showed that for this category consumers who engaged in abstract mental construal were more confident in their evaluations compared to consumers who engaged in concrete mental construal.

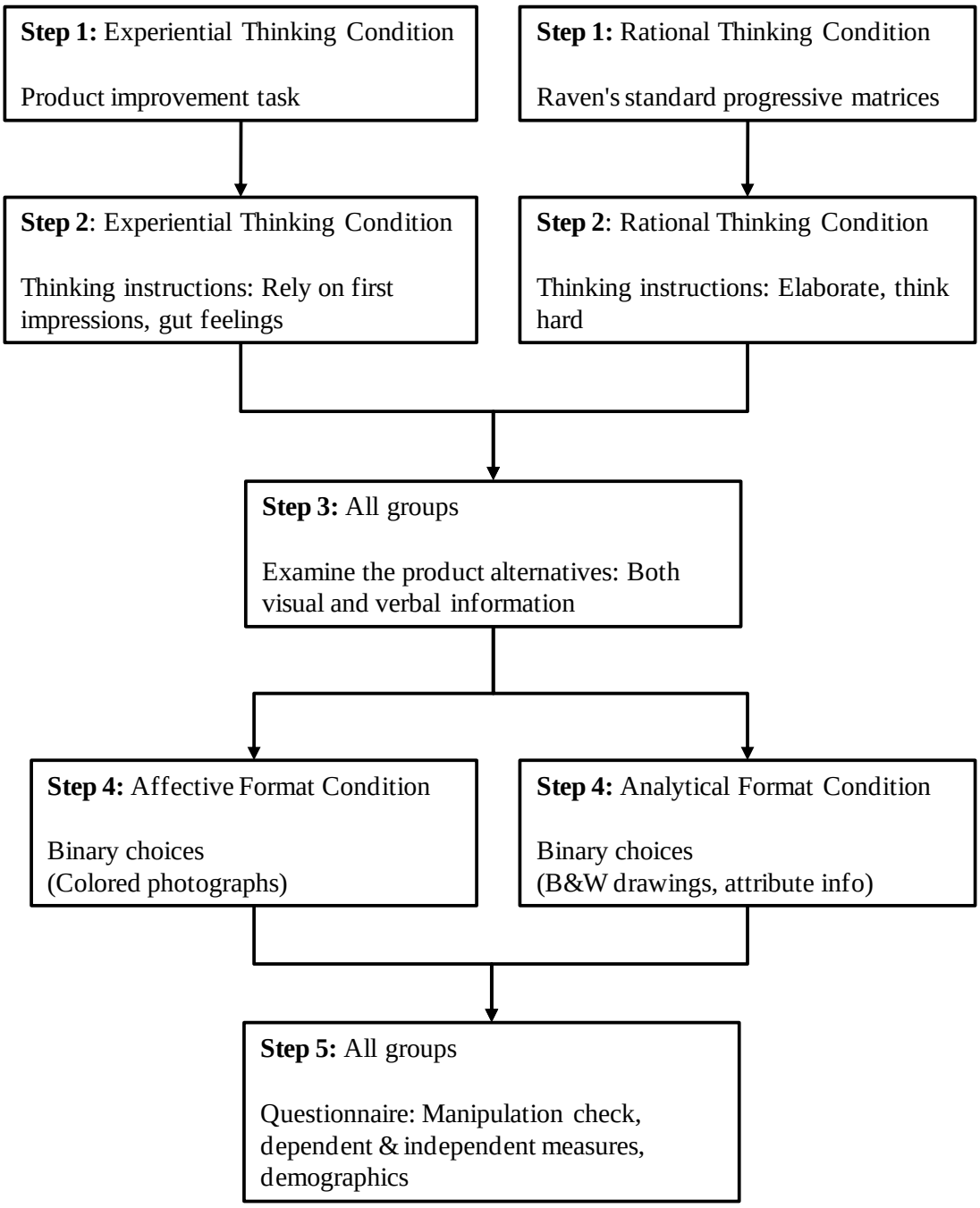
The second study made important contributions to consumer research on mental construal and consistency since prior literature has been quite limited regarding this topic. Besides, this study has been the first to employ such a longitudinal design within this stream of research which enabled us to investigate the impact of matching and non-matching construals on evaluations.

APPENDICES

Appendix A – Distribution of Participants across Experimental Conditions in Study 1

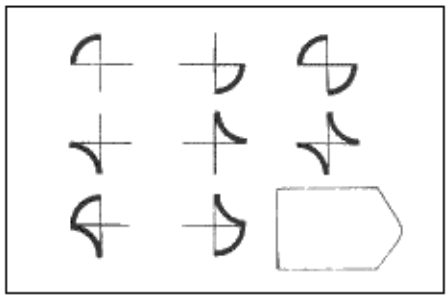
		Thinking style		
		Experiential thinking style	Rational thinking style	Total
Format	Affective format	N = 62	N= 61	N = 123
	Analytical format	N = 57	N = 60	N = 117
	Total	N = 119	N = 121	N = 240

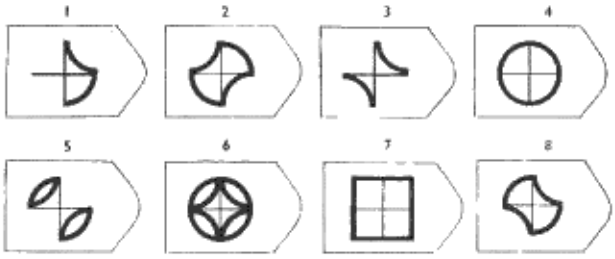
Appendix B – The Procedure of the Experimental Design in Study 1



Appendix C – Rational Thinking Task

Identify the missing element that completes a pattern.





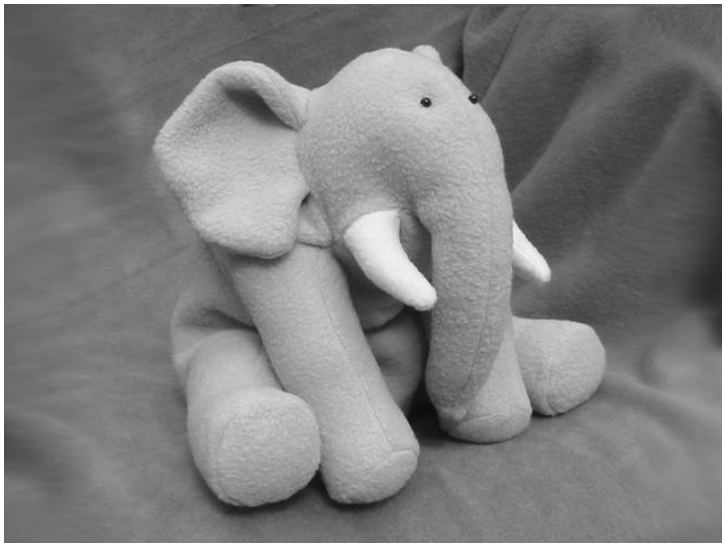
Appendix D – Experiential Thinking Task

Write down creative and novel ways of improving this toy to make it more fun to play with.

_____

_____

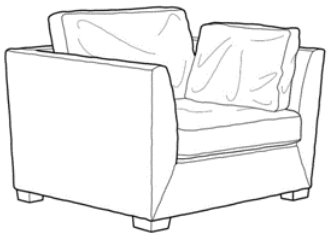
_____

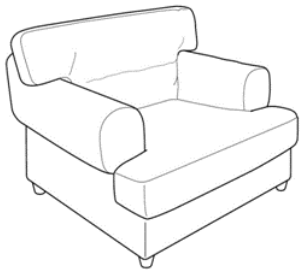


Appendix E – Experiential Stimuli in Study 1

I. Analytical Format

A	B
Seat dimensions: 78 (width) x 58 (depth)	Seat dimensions: 60(width) x 46(depth)
The pillow provides great support for your back or lumbar region.	Seat cushion with waterfowl feathers and high resilient polyurethane foam which molds itself to your body and regains its shape when you stand up
Easy to keep clean with removable, dry clean only cover	Machine washable cover.
Materials:	Materials:
Polyurethane foam 50 kg/m³	Polyurethane foam 40 kg/m³
Solid oak	Solid wood, Particleboard, Plywood
43 % cotton, 25 % polyester, 32 % viscose	100 % cotton





II. Affective Format

Appendix F – Measures of Study 1

Construct	Items
Mood Peterson and Sauber (1983)	Currently, I am in a good mood. As I answer these questions I feel cheerful For some reason I am not very comfortable right now. At this moment I feel edgy or irritable. *(Disagree/Agree)*
Preference for consistency Cialdini, Trost, and Newsom (1995)	It is important to me that those who know me can predict what I will do. The appearance of consistency is an important part of the image I present to the world. I want to be described by others as a stable, predictable person. An important requirement for any friend of mine is personal consistency. I typically prefer to do things the same way. I want my close friends to be predictable. It is important to me that others view me as a stable person. I make an effort to appear consistent to others. It doesn't bother me much if my actions are inconsistent. (reverse) *(Disagree/Agree)*
Involvement Mittal (1995)	In selecting from many types and brands of this product available in the market, would you say that: *(I would not care at all as to which one I buy/I would care a great deal as to which one I buy)* How important would it be to you to make a right choice of this product? *(Not at all important / Extremely important)* In making your selection of this product, how concerned would you be about the outcome of your choice? *(Not at all concerned/ Very much concerned)*
Familiarity Jo, Nakamoto, and Nelson (2003)	How familiar are you with this product category? *(Not familiar at all/ Very familiar)*
Fluency Kramer, and Kim (2007)	Describe your experience of evaluating the alternatives *(Very simple/Very complicated)*

	(Effortful to read/Not effortful to read at all) *(Flowed very smoothly/ Did not flow smoothly at all)*
SSTS items Novak, and Hoffman (2009)	I reasoned things out carefully. I tackled this task systematically. I figured things out logically. I approached this task analytically. I was very focused on the steps involved in doing this task. I applied precise rules to deduce the answers. I was very focused on what I was doing to arrive at the answers. I was very aware of my thinking process. I arrived at my answers by carefuliy assessing the information in front of me. I used clear ruies. I used my gut feelings. I went by what felt good to me. I trusted my hunches. I relied on my sense of intuition. I relied on my first impressions. I used my instincts. I used my heart as a guide for my actions. I had flashes of insight. Ideas just popped into my head. I used free-association, where one idea leads to the next. *(Disagree/Agree)*
Preference Strength	Rate the extent to which you prefer each alternative. *(Definitely prefer A/ Definitely prefer B)*
Product Evaluation	How would you evaluate this alternative? *(Very negative/ Very positive)*
Purchase Intention	If you were to buy a product from this category, how likely is that you would choose the highest scored alternative from this task? *(Certainly would not/ Certainly would)*
Choice Confidence	How confident are you with your evaluation? *(Not confident at all/ Extremely confident)*

Appendix G – Descriptives of the Dependent Variables in Study 1

	Experiential thinking style		Rational thinking style	
	Affective format	Analytical format	Affective format	Analytical format
Preference inconsistency	3.00 (4.24)	4.95 (8.40)	3.10 (4.31)	5.00 (9.17)
Choice duration	2.21 (2.40)	2.67 (1.49)	1.95 (0.71)	3.22 (1.86)
Choice confidence	5.10 (1.77)	4.93 (1.89)	5.15 (1.70)	5.15 (1.66)
Purchase intention	5.16 (1.73)	4.96 (1.72)	5.34 (1.54)	5.28 (1.54)
Fluency	3.74 (1.31)	3.51 (1.48)	3.68 (1.35)	3.53 (1.22)

Note. Number without parentheses refers to means; number with parentheses refers to standard deviations

Appendix H – Means, Standard Deviations, and Coefficients of Variation for Product Evaluation in Study 1

		Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	Rating 7	Rating 8
rational	Mean	5.26	4.02	3.4	4.58	5.69	4.41	4.3	3.37
	SD	1.12	1.55	1.46	1.37	1.24	1.37	1.66	1.75
	C.V.	0.21	0.38	0.43	0.3	0.22	0.31	0.39	0.52
experiential	Mean	4.94	3.81	3.02	4.09	5.63	4.39	4.35	3.24
	SD	1.19	1.59	1.45	1.34	1.43	1.66	1.45	1.56
	C.V.	0.24	0.42	0.48	0.33	0.25	0.38	0.33	0.48
affective	Mean	5.06	4.1	3.18	4.32	5.72	4.47	4.18	3.23
	SD	1.19	1.64	1.58	1.46	1.36	1.6	1.54	1.67
	C.V.	0.23	0.4	0.5	0.34	0.24	0.36	0.37	0.52
analytical	Mean	5.13	3.72	3.23	4.36	5.59	4.33	4.47	3.38
	SD	1.14	1.47	1.34	1.29	1.32	1.43	1.56	1.64
	C.V.	0.22	0.4	0.42	0.3	0.24	0.33	0.35	0.48

Appendix I – Distribution of Participants across Experimental Conditions in Study 2

		Mental Construal at T1		
		HLC	LLC	Total
Mental Construal at T2	HLC	N = 40	N= 41	N = 81
	LLC	N = 39	N = 38	N = 77
	Total	N = 79	N = 79	N = 158

Appendix J – Experimental Stimulus Example of Study 2

E-reader

This e-reader is designed to create a unique reading experience with its ink on paper natural look and revolutionary new screen technology.

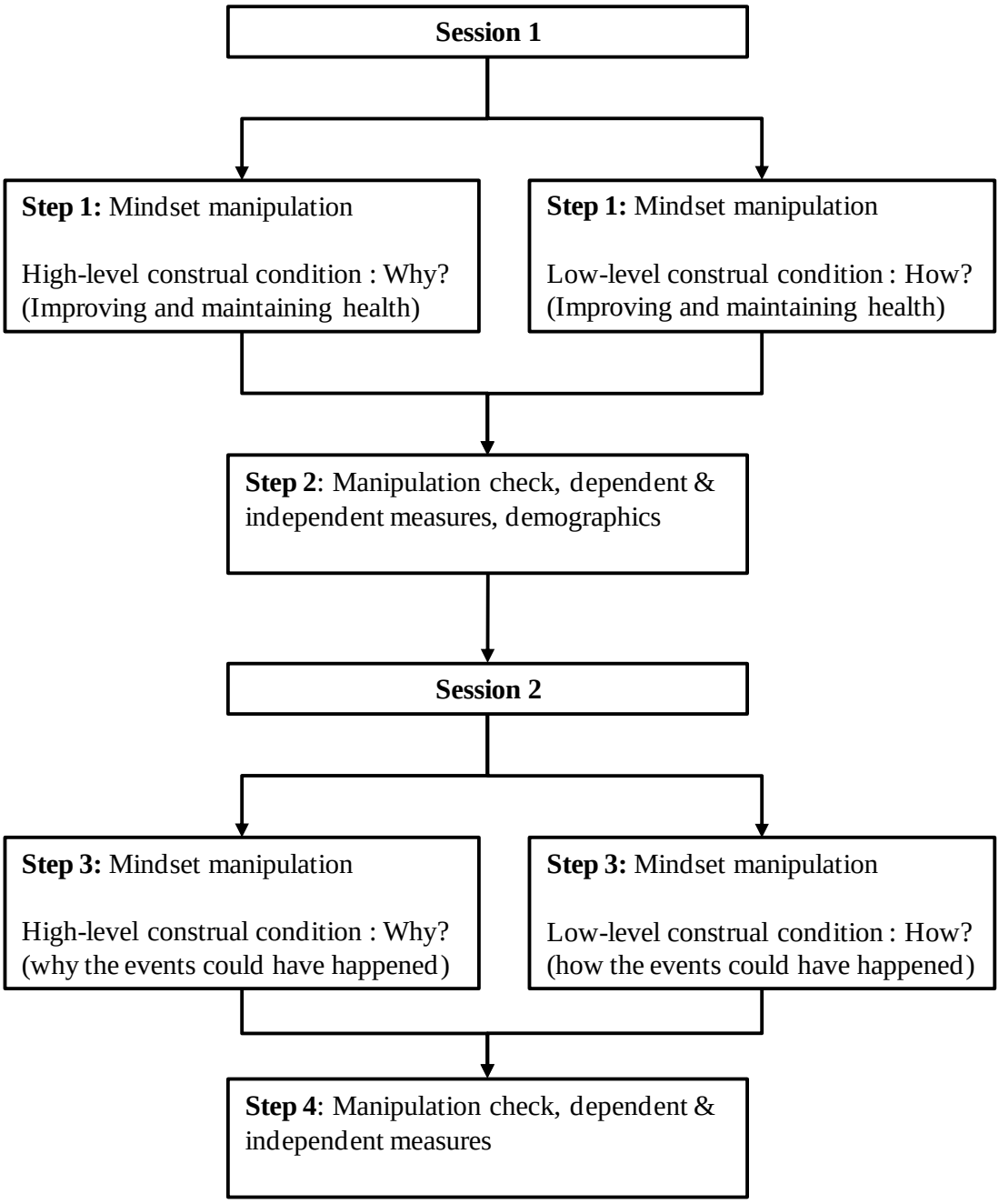
- ✓ Screen size 9.7 inch
- ✓ e-ink
- ✓ Resolution 824 x 1200
- ✓ 3G + Wifi
- ✓ Battery life 30 hours
- ✓ Charging duration 3 hours
- ✓ Voice activated reader
- ✓ Interior memory 4 GB

User Review

Ease of use 2.5 ★★★☆☆

Quality – price ratio 4.5 ★★★★★

Appendix K – Experimental Procedure of Study 2



Appendix L – Mental Construal Manipulation at First Session of Study 2

High-Level Mental Construal Manipulation

"Why Do We Do the Things We Do?"

For everything we do, there is always a reason why we do it. Moreover, we often can link the causes of our behavior back with broad life-goals that we have. For example, you prepare assignments for majority of your classes. Why are you doing this? Perhaps to satisfy the requirements of the course that are determined by the instructor so that you will be successful at class. Why do you want to be successful at class? Perhaps to get a college degree. Why would you like to get a college degree? Probably because you want to find a good job. The reason why you want to get a good job is that doing so can bring you happiness in life.

According to most recent research, when people elaborate on how their actions relate to their life goals, their life satisfaction improves. In this study, we are testing such a method. This thought exercise is intended to focus your attention on why you do the things you do.

For this thought exercise, please consider the following activity:
"Improve and maintain your health."
1a. Please list one way in which improving and maintaining your health could help you meet an important life goal that you have.

_ _

1b. How much will improving and maintaining your health help you meet this important
goal?

A Little	1	2	3	4	5	6	7	Very Much

2a. Please list one way in which improving and maintaining your health could help you meet an important life goal that you have.

_ _

2b. How much will improving and maintaining your health help you meet this important
goal?

A Little	1	2	3	4	5	6	7	Very Much

3a. Please list one way in which improving and maintaining your health could help you meet an important life goal that you have.

_ _

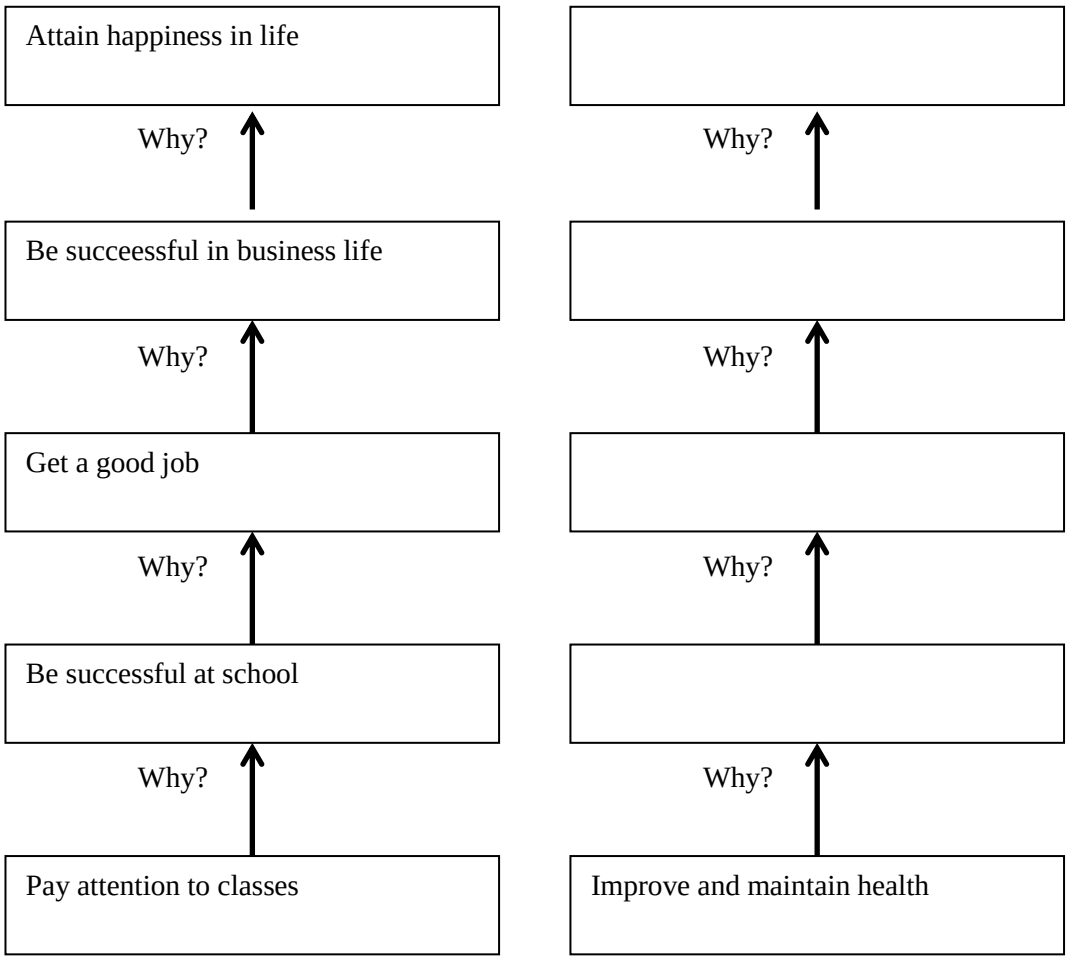
3b. How much will improving and maintaining your health help you meet this important
goal?

A Little	1	2	3	4	5	6	7	Very Much

Please fill in the 4 blank boxes below on the right to demonstrate how the goal of "improving and maintaining your health" can help you meet important life goals that you have. Starting with the lowest box (the one above the box labeled "improve and

maintain my health") fill in all of the boxes by answering the question "Why do I engage in the behavior described in the lower box?"

The example on the left, which we provide to help you with this exercise, demonstrate how paying attention to classes can be linked to important life goals.



Low-Level Mental Construal Manipulation

"How Do We Do the Things We Do?"

For everything we do, there is always a process of how we do it. Moreover, we often can link our broad life-goals down to our very specific behaviors. For example, you probably hope to find happiness in life. How can you do this? Maybe with a college degree you may get a good education and find a good job. How can you get a college degree? Perhaps by satisfying requirements set by the course instructors. How do you satisfy these requirements? In most cases, by attending to classes and preparing the assignments.

According to most recent research, when people elaborate on how their life goals can be expressed through specific actions, their life satisfaction improves. In this study, we are testing such a method. This thought exercise is intended to focus your attention on how you do the things you do.

For this thought exercise, please consider the following activity:
"Improve and maintain your health."
1a. Please list something you could do in order to improve and maintain your health.

_ _

1b. How much will engaging in this activity improve and maintain your health?

A Little	1	2	3	4	5	6	7	Very Much

2a. Please list something else you could do in order to improve and maintain your health.

_ _

2b. How much will engaging in this activity improve and maintain your health?

A Little	1	2	3	4	5	6	7	Very Much

3a. Please list something else you could do in order to improve and maintain your health.

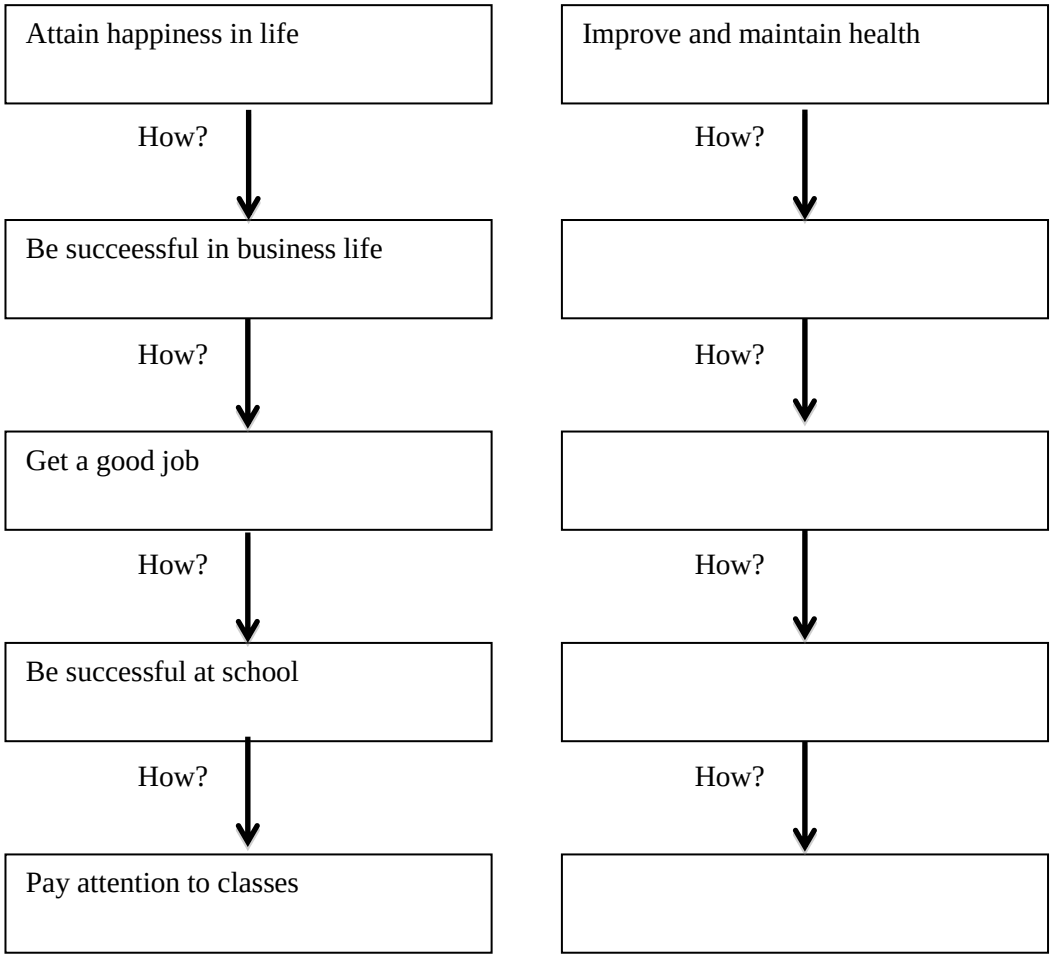
_ _

3b. How much will engaging in this activity improve and maintain your health?

A Little	1	2	3	4	5	6	7	Very Much

Please fill in the 4 blank boxes below on the right to demonstrate how the goal of "improving and maintaining your health" can be met through specific activities. Starting with the highest box (the one below the box labeled "improve and maintain my health") fill in all of the boxes by answering the question "How can I meet the goal described in the higher box?"

The example on the left, which we provide to help you with this exercise, demonstrates how paying attention to classes can be linked to specific activities.



Appendix M – Mental Construal Manipulation at Second Session of Study 2

This section is a pretest for a study on story building, which examines how people interpret different events they read about and what general impressions are created by different narratives. In other words, we are interested in how people visualize actions and events they read about in their minds. Bellow, there is a list of short descriptions of different actions that people might consider doing. Please simply read each description, imagine that the person is actually considering doing the action, and answer the questions that follow.

<u>Abstract mental construal condition</u>

- "Zeynep is considering enrolling in a fitness program."

Please describe why you think Zeynep would do that.

_ _

What might be the underlying reason for that?

_ _

- "Murat is considering opening a bank account."

Please describe why you think Murat would do that.

_ _

What might be the underlying reason for that?

_ _

- "Yeliz is considering going to a driving school."

Please describe why you think Yeliz would do that.

_ _

What might be the underlying reason for that?

_ _

- "Gamze is considering subscribing to a magazine."

Please describe why you think Gamze would do that.

_ _

What might be the underlying reason for that?

_ _

- "Ozan is considering learning to play the piano."

Please describe why you think Ozan would do that.

_ _

What might be the underlying reason for that?

_ _

- "Bahar is considering buying a computer."

Please describe why you think Bahar would do that.

_ _

What might be the underlying reason for that?

_ _

Concrete mental construal condition

- "Zeynep is considering enrolling in a fitness program."

Please describe how you think Zeynep would do that.
_ _
List the first three steps to do this.
_ _

- "Murat is considering opening a bank account."

Please describe how you think Murat would do that.
_ _
List the first three steps to do this.
_ _

- "Yeliz is considering going to a driving school."

Please describe how you think Yeliz would do that.
_ _
List the first three steps to do this.
_ _

- "Gamze is considering subscribing to a magazine."

Please describe how you think Gamze would do that.
_ _
List the first three steps to do this.
_ _

- "Ozan is considering learning to play the piano."

Please describe how you think Ozan would do that.
_ _
List the first three steps to do this.
_ _

- "Bahar is considering buying a computer."

Please describe how you think Bahar would do that.
_ _
List the first three steps to do this.
_ _

Appendix N – Measures of Study 2

Construct	Items
Product Evaluation	How would you evaluate this alternative? *(Very negative/ Very positive)*
Choice Confidence	How confident are you with your evaluation? *(Not confident at all/ Extremely confident)*
Purchase Intention	If you were to buy a product from this category, how likely is that you would choose the highest scored alternative from this task? *(Certainly would not/ Certainly would)*
Involvement	How important would it be to you to make a right choice of this product category? *(Not at all important / Extremely important)*
Familiarity	How familiar are you with this product category? *(Not familiar at all/ Very familiar)*
Knowledge	For this product category, I have enough knowledge to understand all of the given information *(Disagree/Agree)*
Recall	For the product categories mentioned below, to what extent can you recall the evaluations you made in the first session of this study? *(Can not remember at all/Remember very well)*
Fluency Kramer, and Kim (2007)	Describe your experience of evaluating the alternatives *(Very simple/Very complicated)* *(Effortful to read/Not effortful to read at all)* *(Flowed very smoothly/ Did not flow smoothly at all)*

Appendix O – Manipulation Check of Study 2

Manipulation Check for the First Session

Choice Percentage of High-Level Action Identification During First Session

	Construal Level	
Behavioral Identification Form item	Low	High
Eating		
Getting nutrition vs. chewing and swallowing	79	85
Filling out a personality test		
Answering questions vs. revealing what you are like	60	68
Making a list		
Getting organized vs. writing things down	74	73
Having a cavity filled		
Protecting your theeth vs. going to the dentist	51	63
Voting		
Influencing the election vs. marking a ballot	73	86
Caring for houseplants		
Watering plants vs. making the room look nice	43	37
Picking an apple		
Getting something to eat vs. pulling an apple off a branch	18	22
Locking a door		
Putting a key in the lock vs. securing the house	79	87
Paying the rent		
Maintaining a place to live vs. writing a check	69	67
Travelling by car		
Following a map vs. seeing countryside	67	79

Note. Numbers indicate the percentage of participantsin each condition who preferred the high-level action identification over the low-level action identification

Manipulation Check for the Second Session

Choice Percentage of High-Level Action Identification During Second Session

	Construal Level	
Behavioral Identification Form item	Low	High
Reading		
Following lines of print vs. gaining knowledge	86	93
Toothbrushing		
Preventing decay vs. moving a brush in one's mounth	80	83
Taking a test		
Answering questions vs. showing one's knowledge	44	53
Greeting someone		
Saying hello vs. showing friendliness	50	48
Measuring a room for carpeting		
Getting ready to remodel vs. using a yardstick	57	55
Chopping down a tree		
Wielding an axe vs. getting firewood	48	53
Washing clothes		
Removing odors from clothes vs. putting clothes into machine	70	67
Climbing a tree		
Getting a good view vs. holding on to branches	37	39
Talking to a child		
Teaching a child something vs. using simple words	63	68
Growing a garden		
Planting seeds vs. getting fresh vegetables	57	41

Note. Numbers indicate the percentage of participantsin each condition who preferred the high-level action identification over the low-level action identification

Appendix P – Means and Standard Deviations of Preference Inconsistency across Conditions in Study 2

	T1 LLC		T1 HLC	
	T2 LLC	T2 HLC	T2 LLC	T2 HLC
Mobile Phone	2.18	2.27	2.66	1.90
	(2.20)	(1.87)	(2.56)	(1.35)
Laptop	3.18	2.85	2.97	1.60
	(2.29)	(2.02)	(2.28)	(1.52)
Tablet	3.34	2.73	3.32	2.15
	(2.21)	(2.46)	(2.39)	(1.82)
E-reader	2.87	3.88	2.89	3.23
	(2.36)	(3.15)	(2.89)	(2.49)
Camera	1.95	2.56	1.92	1.18
	(2.38)	(2.42)	(2.12)	(0.98)

Note. LLC_ Low level construal, HLC_ High level construal

Number without parentheses refers to means; number with parentheses refers to standard deviations

Appendix R – Means and Standard Deviations of Fluency and Choice Confidence for Session 1 and Session 2 across Conditions in Study 2

	T1 LLC	T1 HLC	T2 LLC	T2 HLC
Confidence in Evaluation for Mobile Phone	5.60 (1.30)	5.73 (1.14)	5.77 (1.06)	5.58 (1.08)
Confidence in Evaluation for Laptop	5.76 (1.35)	5.43 (1.37)	5.57 (1.38)	5.40 (1.21)
Confidence in Evaluation for Tablet	5.54 (1.31)	5.46 (1.37)	5.40 (1.21)	5.32 (1.19)
Confidence in Evaluation for E-reader	5.49 (1.36)	5.91 (1.15)	5.27 (1.53)	5.29 (1.28)
Confidence in Evaluation for Camera	6.01 (1.12)	5.89 (1.19)	5.69 (1.30)	5.58 (1.24)
Fluency	4.73 (1.43)	4.04 (1.28)	4.17 (1.47)	4.26 (1.39)

Note. LLC_ Low level construal, HLC_ High level construal
Number without parentheses refers to means; number with parentheses refers to standard deviations

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