Information Load And Consumer Decision Quality

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1. Introduction

1.1 Problem background
Nowadays, consumers are constantly faced with making decisions regarding the choice of purchase of products and services (Bettman et al., 1999). In addition, the information environments grow faster than ever and consumers are exposed to an ever-increasing amount of different product information (Lee & Lee, 2004). Over the last decades, many researchers (Jacoby et al. (1974); Malhotra (1978); Keller & Staelin (1989); Scammon 1977) argued about the amount of information available and the effects of these amounts on the consumer decision quality. However, these results provided by previous research have not been consistent and did not provide a unified picture of the relationship between effects of the amount of information on the quality of consumer decision making. Also, there have been many discussions about the approach of how to measure and define the phenomenon information load, which might have led to inconsistent conclusions among researchers about these effects of information load on the quality of consumer decision making.

Other research that has been conducted in the field of the quality of consumer decision making, was focused on the human processing capacity. Previous research has revealed that the human information processing capacity is limited (Bettman, 1979). Also, thinking mode covers this aspect of limited processing capacity. There might be an influence of thinking mode on the relationship of the information load and the consumer decision making. This research covers the field of conscious and unconscious thinking when receiving a given amount of information and how this amount of information affects the consumer decision quality. According to Dijksterhuis (2004), the conscious processing capacity is limited. The unconscious however, does not have a capacity problem. By means of distraction Dijksterhuis (2004) showed that the unconscious was able to make more complex decisions. Also, Dijksterhuis & Nordgren (2006) proposed the Unconscious Thought Theory, which describes the strengths and weaknesses of unconscious and conscious thought.

This paper will discuss the existent research on the influence of the amount of information on the consumer decision quality with the purpose to attain one consistent conclusion, since none of the previous research has been conclusive. But, this paper will also focus on the effect of the thinking mode (conscious or unconscious thinking) on the relationship between the
information load and the consumer decision quality, as the effect of information load on
decision quality will critically depend on the consumers’ processing mindset.

1.2 The problem statement
In order to explain and to gain more insight of the effects of the information load on the
consumer decision quality, a better understanding needs to be established in what the effects
of information load are on consumer decision quality and how the thinking mode influences
this relationship. As a result of the statements mentioned above, the following question will
be researched:

*What are the effects of information load on the consumer decision quality and how does the thinking mode influence this relationship?*

1.3 Research Questions
1. What are the dimensions of information load?
2. What are the effects of information load on consumer decision quality?
3. What is thinking mode?
4. How does the thinking mode influence the relationship between the perceived information
   and consumer decision quality?

1.4 Conceptual Framework
Below the conceptual model derived from the problem statement and the research questions
as stated in the previous paragraph.
The dependent variable of this research is the consumer decision quality. The quality of the decision of the consumer is defined as, choosing the best option or considering the best alternative among the different alternatives given in a choice set, however, in reality the decision quality is hard to assess. According to Jacoby (1977), there does not exist a universal accepted approach for defining decision quality in the consumer context. Janis & Mann (1977, pp.11) argue that there is no dependable way of “objectively assessing the success or quality of a decision”, however it is not impossible. Wilson & Schooler (1991) used an approach called the “expert opinion”, in which an expert objectively identifies what represents as the “best” decision. Also, Jacoby (1977) used this approach in his experiment and asked Procter & Gamble to identify the best laundry detergent on the market for the purpose of using it as an external standard in his research. They concluded that there was no way to determine objectively which brand was best for all consumers, because each consumer has different needs and opinions. What was best for one certain consumer does not necessarily mean that it is the best option for another consumer as well (Jacoby, 1977).

Häubl & Trifts (2000) measured the consumer decision quality by means of objective and subjective indicators. This indicator is assessed by whether a consumer purchases a non dominated alternative or a dominated alternative (Häubl & Trifts, 2000). Another measure of an objective decision quality they used in their research was, whether the participant wanted to switch to an alternative when the opportunity was given. If the participant was willing to switch to another alternative, the decision quality was considered to be poor. Furthermore, the subjective decision quality was assessed by means of the confidence degree of the consumer when making a decision. (Häubl & Trifts, 2000)

The purpose of this thesis is to illustrate how the independent variable information load is related to decision quality, and how this relationship is moderated by thinking mode. In the next chapters information load will be defined as well as its dimensions. Furthermore, the thinking mode will be further explained.
1.4 Relevance
In this chapter the academic relevance and the managerial relevance for this thesis will be elaborated.

**Academic Relevance**
Over the past decades, much research has been conducted on the effects of the information load on the consumer decision making. Since Jacoby et al (1974) first introduced the term “information overload”, other researchers (Russo (1974), Wilkie (1974), Scammon (1977), Malhotra (1982), Keller & Staelin, (1987)) were motivated to clarify this matter. However, the results of the different studies conducted slightly differ from another and none of the previous research is conclusive. Also, the approaches in determining information load remain diverse. This paper will focus on the different approaches on how to determine information load, with the purpose to achieve one consistent conclusion, and to gain and provide more insight in the effects of the information load on the consumer decision quality. Also, previous research only concentrated on the aspects of information load and how these aspects influence the consumer decision quality. This paper will add a moderating variable, namely the thinking mode (conscious thinking and unconscious thinking). Dijksterhuis (2004), Dijksterhuis & Van Olden (2005), Dijksterhuis & Nordgren (2006) have conducted much research on how conscious thought and unconscious though can influence the consumer decision quality. However, no research has been done yet covering the influence of thinking mode on the relationship between the information load and the consumer decision quality. This paper will add to existent research by researching the role of thinking mode in the relationship of information load and consumer decision quality.

**Managerial Relevance**
The accessibility and availability of information have increased tremendously over the past decade. A great contribution to the increase of the availability of information is the internet and the enormous growth of competition. Since the literature available on this topic, seem to be contradictory, an overall consistent conclusion must be drawn. Consumer decision making is a complex process and is of course of great interest for companies, because they are somewhat dependent on consumers choosing their products above other products. Providing too much information could cause the consumer to be “overloaded” with information and therefore a decline in decision quality could occur (Jacoby et al (1974), Malhotra (1982), Keller & Staelin (1987)). For marketers this is also important to know what the precise amount of information is needed on which consumers can base their decision (Ariely, 2000). Thus,
knowing what the influence of the amount of information is on the quality of consumer’s
decision is of great importance.

1.5 Structure of the thesis
In the second chapter, the definition and dimensions of information load will be explained as
well as how these dimensions of information load influence consumer decision quality. What
relationship exists between these dimensions independently on the quality of a consumer’s
decision? This will be researched based on previous research conducted on this topic. The
third chapter will focus on thinking mode. The definition of thinking mode will be set out.
Thereafter, the influence of thinking mode on the relationship between the load of information
and consumer decision quality will be discussed. In the last chapter, an overall conclusion
will be given as well as the limitations and suggestions for future research.
2. Information load and consumer decision quality

Over the past decades, much research has been conducted about the factors that define information load. Jacoby et al (1974) were amongst the first consumer behavior researchers that had investigated this topic. They used a more traditional approach in determining the factors of information load. After these results were published, other parties have researched this matter as well. In the first paragraph of this chapter the definition of information load will be explained, as well as the dimensions that determine information load will be discussed. In the second paragraph, the effects of information load on consumer decision quality will be explained by means of the traditional approach and the structural approach. At the end of this chapter a short summary will be given.

2.1. What is information load?

According to Jacoby (1977, pp 114), “Information load refers to the variety of stimuli (in type of number to which the receiver must attend).” In addition, information load can be described as the information available to the consumers (Scammon, 1977). To determine the amount of information in a choice set, information depends on multiple dimensions. There exist two approaches in determining the information load, namely the traditional approach and the structural approach. Jacoby et al (1974), Keller & Staelin (1987), Malhotra (1982), were the researchers that followed the more traditional approach in measuring the amount of information provided to consumers. They mainly focused on two factors, namely the amount of attributes and the amount of alternatives. These two factors were used to make predictions about the decision processes and the quality of these decisions (Jacoby et al, 1974). Keller & Staelin (1987) have added another important factor, namely the quality of information. The quality of information can be described as the “usefulness of information to consumers in assessing the usefulness of an alternative” (Keller & Staelin, 1987, pp. 200). Lurie (2004) however, used a structural approach in determining information load. The structural approach to information asserts that there exist more important dimensions in determining the amount of information. These dimensions include the amount of attributes; the amount of alternatives, the amount of attribute levels and the distribution of attribute levels across alternatives.
<table>
<thead>
<tr>
<th>Traditional approach (Jacoby et al, 1974)</th>
<th>Structural approach (Lurie, 2004)</th>
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<tr>
<td>Amount of attributes</td>
<td>The number of attributes</td>
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<td>Amount of alternatives</td>
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<td>The number of different attribute levels associated with each attribute.</td>
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<td>The distribution of attribute levels across alternatives.</td>
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Table 2.1 Traditional approach and Structural approach

From the table presented above it can be derived that the approaches have two similar dimensions.

*Amount of attributes* refers to the number of attributes provided. This refers to the number of attributes per brand (Jacoby et al, 1974).

*Amount of alternatives:* this is defined as the number of items or attributes describing an alternative (Summers (1974), Wilkie, 1974). This refers to the number of brands.

*Number of different attribute levels associated with each attribute:* This refers to the amount of different attribute levels related to each different attribute (Lurie, 2004). For example, there are four different levels of battery life for laptops (2 hours, 4 hours, 6 hours and 8 hours).

*Distribution of attribute levels across alternatives:* This could be defined as how the different attribute levels are divided across the alternatives. The attribute levels can be divided evenly or unevenly (Lurie, 2004). For example, if these four levels are evenly distributed across the alternatives, such that 1/4 of the laptops have 2 hours of battery life, 1/4 of the laptops have 4 hours of battery life, 1/4 of the laptops have 5 hours of battery life and 1/4 of the laptops have 8 hours of battery life. And if these attribute levels are unevenly distributed, for example: 1/16 of the laptops have 2 hours of battery life, 12/16 of the laptops have 4 hours of battery life, 2/16 of the laptops have 6 hours of battery life and 1/16 of the laptops have 8 hours of battery life.

How these dimensions influence information load will be discussed in the next paragraph.
2.2 How does information load affect the consumer decision quality?

*The Traditional Approach*

The effect of information load on decision quality is significant, yet empirical results have unfortunately been inconsistent. As mentioned above, there exist several approaches on how to determine the effects of information load on the consumer decision quality. Jacoby et al (1974) used a traditional approach to study the effects of various amounts of information on the consumer’s product decision quality. They proposed convincing results establishing the effect of information load on the consumer’s capability to make correct decisions among many products. Jacoby et al (1974) conducted an experiment in which they varied both the amount of (product) attributes on which information was disclosed and the number of alternatives (e.g. brands) on which information was made available. If the numbers of alternatives on which information was made available increased, thus an increase of information load, there was a slight decrease in consumer decision quality. As a result, it was concluded that more information likely to decrease the quality of the consumer’s decision.

In these studies conducted by Jacoby et al (1974), an inverted U-shaped relationship between the amount of information and decision quality was found. This U-shaped relationship was established earlier by Schroder et al (1967). It implies that the quality of decisions of an individual has a positive correlation with the amount of information one receives. This positive correlation only stays up to a certain point. If further information is provided beyond this certain point, the performance of the individual decision making will decrease. The information provided exceeding this certain point will be no longer processed into the decision making process and information overload will be the result, and consequently result in poorer decision making (Eppler & Mengis, 2004). Thus, more information causes poorer decisions.

Other researchers that followed the traditional approach, however, questioned this approach and the results of Jacoby et al. According to Malhotra et al (1982), the amount of information cannot simply be measured as Jacoby et al did. Other researchers as Wilkie (1974), Russo (1974) produced different outcomes and found little or no effect of information overload on choice quality at all by reanalyzing the data of Jacoby et al. Also, Scammon (1977) used “logit regression modeling” and concluded that there existed no decrease in choice quality as the amount of attribute information increased. Malhotra (1984), however, conducted a new study and increased the choice set. He varied both the number of alternatives and the number
of attributes at five levels each and came to the conclusion that large amounts of attribute information indeed cause a decrease in choice quality. In his study it was shown that the subjects did suffer from information overload. He conducted an experiment in which the participants were asked to choose among houses. His research indicated that dysfunctional effects of information overload indeed occur if one was provided with ten or more alternatives in the choice set or with information on 15 or more attributes (Malhotra, 1984). This effect can also be explained with previous research conducted in this field. Streufert et al (1967) assert that the decision quality decreases when the information load is beyond ten attributes. However, the information load effects remain constant for ten to 25 alternatives or for 15 to 25 attributes (Malhotra, 1984). Conclusively, results of the research conducted by Malhotra (1984) revealed that the choice quality decrease when the number of alternatives increased from five to ten or more, and when the number of attributes increased from 5 to 15 and more.

Thus, the traditional approach to investigate the effects of the amount of information on the decision quality mainly focused on the varying the number of alternatives and the number of attributes. Since these results remained inconsistent, other researchers were motivated to research the effect of other dimensions of information, including the number of alternatives and attributes on the decision quality of consumers. Keller & Staelin (1987), determined two dimensions to be the most important in determining information load, namely the quality of information and the quantity of information. The quality of information refers to the “cumulative importance” of information where as the amount of alternatives and attributes were defined as the quantity of information (Keller & Staelin, 1987). They came to the conclusion that both the presence of too much available information and too much high quality information have a negative influence on the decision quality of the consumers, and cause a decrease in the consumer decision quality (Keller & Staelin, 1987). These results are similar to Malhotra (1982), as both studies proved that large amounts of attribute information decreases the quality of choice. Also, the results of the research of Keller & Staelin (1987) revealed that, when information quality was hold constant, an increase in information quantity negatively affected the decision quality. And when information quantity was held constant, increasing information quality increased decision quality to some point.
The Structural Approach

The most recent research covering this topic has been conducted by Lurie (2004). In measuring the effects of the amount information on consumer decision quality, Lurie (2004) used the dimensions of the information theory, developed by Shannon (1949) and later extended by Garner (1962). The structural approach to information suggests that there are two more important dimensions that determine the amount of information. These dimensions include the dimensions of the traditional approach. Lurie’s (2004) structural approach proposes that the amount of information to process, increases with the number of attribute levels, and is the highest when attribute levels are distributed evenly across alternatives, or when there are more attribute levels. In his study, using this structural approach, Lurie (2004) varied the number of electronic calculators from 18 to 27. The distribution of the attribute levels were varied from equal to unequal. He asked the participants to choose the best alternative. The results imply that the probability of choosing the best calculator was higher when there were 18 alternatives and the distribution was unequal. Conclusively, this study indicates that consumers would make better decisions when fewer alternatives were provided and when attribute levels were unequally distributed across alternatives.

According to the structural approach, the amount of information that must be processed increase, if the number of attribute levels increase as well (Lurie,2004). However, Lurie (2004) found that, although an increase in the number of alternatives exists, information overload occurs when all other dimensions are held constant. But this increase in the number of alternatives does not necessarily lead to information overload when the other dimensions, such as the distribution of attribute levels across alternatives and the number of attribute levels are changed. Conclusively, the experiments conducted by Lurie (2004) proved that increased amounts of information leads to declines in quality. Furthermore, other dimensions, such as the number of attribute levels and the distribution of those levels are also of great importance in determining the amount of information, rather than only a simple count of alternatives and attributes. Also, his study pointed out that consumers made better decisions when fewer alternatives were given and the attribute levels were unevenly allocated across alternatives.
2.3 Discussion
Studies conducted to determine the effects of information load on consumer decision quality, following the traditional approach, have resulted in inconsistent and mixed results. However, the structural approach in determining the effect of the amount of information on consumer decision quality, used by Lurie (2004) might be a more accurate and effective way. Because this approach includes the two determinants of the traditional approach, but also sees the importance of the number of attribute levels and the distribution of those levels across alternatives. This approach implies that information overload could occur even if there is no change in the amount of attributes or the amount of alternatives, but only a change in one of these dimensions that increases the total amount of information in a choice set, can lead to declines in decision quality.

Based on the previous research set out above, conclusions can be drawn about how information load affects the quality of a consumer’s decision.

The amount of attributes and the amount of alternatives contribute to more information. The more attributes and alternatives presented, the more the information. It appears that both the amount of attributes and the amount of alternatives have a negative influence on the consumer decision quality. If the quantity of information increases, it appears to cause a decrease in decision quality. This has been researched and proven by Jacoby et al (1974), Malhotra (1984), and Keller & Staelin (1987).

The results of the research of Lurie (2004) suggest that the distribution of the different attribute levels increases the information quantity when the attribute levels are evenly distributed. This makes it harder for the decision maker to guess the attribute value, resulting in a decline in decision quality (Lurie, 2004). Also, an increase in the different levels of attributes can cause a decline in decision quality.
3. Thinking mode

In this chapter the definition of thinking mode will be explained. First a short experiment conducted by Dijksterhuis (2004) will be discussed. Thereafter, the two modes of thought will be set out. The second paragraph will focus on how thinking mode can influence the relationship between information load and consumer decision quality. At the end of the chapter a short discussion will be included.

3.1 What is thinking mode?
Dijksterhuis (2004) have conducted several experiments concerning the quality of choice between given alternatives under different conditions. In these experiments, some participants were given the opportunity to think consciously about the decisions, some may not think at all and some participants were distracted, so that they could reside in unconscious thought (Dijksterhuis, 2004). In the experiment he asked the participants to make a decision regarding four hypothetical apartments in Amsterdam. Each apartment was described by twelve characteristics (for example, apartment A has a nice view, apartment B is in a nice neighborhood). The participants were thus given 48 pieces of information in total. In addition, one of the four apartments was made more desirable by given that particular apartment more positive features than the other three apartments, and one of the apartments was made more undesirable by given it more negative features. The two apartments remained were neutral. The participants now had to choose the best option (Dijksterhuis, 2004). As explained earlier, some participants had to make the decision consciously, some unconsciously and some did not had the opportunity to think at all. The results of this experiment indicated that the unconscious thinkers performed significantly better than the conscious thinkers and the participants that did not think at all. To be more specific, the conscious thinkers and the participants who had to choose immediately did not show a greater preference of the desirable apartment than the undesirable apartment. They simply did not know which apartment was better. The unconscious thinkers however, did indicate a preference for the more desirable apartment (Dijksterhuis, 2004).

According to the Unconscious-Thought Principle proposed by Dijksterhuis & Nordgren (2006), there exist two modes of thought. These two modes of thought are conscious and unconscious thinking. The conscious thought can be defined as the “cognitive or affective task-relevant processes a person is consciously aware of while executing a task” (Dijksterhuis,
2004, pp. 586). Unconscious thought however, refers to “the unconscious processes dealing with a problem, while the conscious thought is directed elsewhere (distraction)” (Dijkserhuis & Van Olden, 2005, pp. 628). It is thought without the awareness of the consciousness.

Much research has been conducted in this field to investigate the conscious and unconscious thoughts and their strength and weaknesses. Several researchers state that the human information processing capacity of the consciousness is limited (Bettman, 1979, Dijksterhuis, 2004). According to Miller (1956), the maximum amount of information that can be processed at any given time is about seven chunks or units. The unconsciousness however, does not suffer from this capacity problem and is able to process a large, unlimited amount of information (Dijksterhuis, 2004). So, findings suggest that unconscious thought has less problems dealing with huge amounts of information. In the next paragraph this will be explained by means of the Unconscious-thought principle developed by Dijksterhuis & Nordgren (2006), which is based on their own and other investigator’s empirical work.

3.2. How does thinking mode affect the relationship between information load and consumer decision quality?

In the first section the conscious thought and its main constraint, the processing capacity will be discussed. Thereafter, the deliberation-without-attention-effect will be shortly explained. The second section will focus on the unconscious thought.

Conscious thought: the capacity principle
One of the main constraints of conscious thought is its limited processing capacity. One is not able to focus consciously on two different things at the same time and because the consciousness is constraint with the low capacity, it is hard to make complex decisions and prevents it from correct decision making. The processing ability is defined as a “function of the number of attributes processed and the level of complexity of the integrative structure for combining and interrelating the information perceived” (Henry, 1980, pp.43). Decision makers often must evaluate and integrate much information simultaneously. However, previous researches in human information processing provide the fact that the human processing capacity is limited and problems may arise when that limit is reached (Bettman, 1979). According to Miller (1956) the processing capacity of the short-term memory had approximately a maximum of seven chunks of information. Schroder et al (1967) have developed a model that explains the relation between information load to human information processing. This model implies that, if there is an increase in information load, decision
makers will increase their information processing. However, if the information load keeps increasing and eventually exceeds the capacity of the decision makers, the information processing will stop increasing and the decision makers will experience a decrease in processing capacity as they experience the phenomenon information overload. Malhotra (1984) has researched this matter and concluded that consumers do have finite limits to absorb and process information. If consumers are provided with too much information at a given time, such that the amount of information exceeds their processing limits, overload will occur, and eventually results in poorer decision making. Thus, information overload results in two major constraints in decision making. According to Elliot, (1988) information overload makes it difficult for the consumer to consider what is relevant due to the high amount of information, resulting in not being able to point out what is the most important among the relevant data, which in turn eventually can lead to a decline in decision quality as well.

Also, Wilson & Schooler (1991) have proven that the low processing capacity of the consciousness can result in poorer decisions. They conducted an experiment regarding the choice of posters, different brands of jams or different college courses. In this experiment the participants were asked to evaluate the different objects. Some participants were asked to assess the objects without thinking too much, while others were asked to analyze their reasons for their judgments when evaluating the objects (thus, thinking consciously about it). The results of this experiment asserted that conscious thinkers made less accurate evaluations compared to those participants who thought less. According to Wilson & Schooler (1991), conscious thought led people to focus on only a limited number of attributes resulting in not considering other relevant attributes.

The experiment conducted by Dijksterhuis (2004) regarding the choice of apartments described in the previous paragraph also supports this matter. The participants in this experiment were not only asked to decide what the best apartment was, but were also asked how they came to this conclusion. That is, did the participants base their decision on one or two specific attributes or did they base their decision on a more complete assessment. The results of this experiment indicated that forty-two percent of the participants, who immediately had to make a decision, said they made a more complete and comprehensive judgment. In addition, the percentage of comprehensive judgments was higher for those who thought unconsciously (56%), but was much lower for the conscious thinkers (27%), thus substantiating the capacity principle (Dijksterhuis, 2004). Conclusively, the majority of the
conscious thinkers showed that they based their decisions on only one or two attributes. Also, the participants who made a comprehensive choice and whether they made the right choice confirmed that a comprehensive judgment more often led to the selection of the most desirable apartment. Hence, the consciousness uses and processes only a part of the available information due to the limited processing capacity. This results in a decrease in the quality and the accuracy of a decision (Dijksterhuis, 2004).

Conscious thought: The Deliberation-Without-Attention Effect
This effect states that that conscious thought is able to make good decisions when the decision problem is simple, but the decision quality declines when the decision problem get more complex (Dijksterhuis & Nordgren, 2006). This effect is based on the theory of the rule principle and the capacity principle. According to the rule principle, a characteristic of the unconscious-thought principle is that conscious thought is only able to follow strict rules. When residing in unconscious thought, “a person can deal with logical problems that require being and following rules strictly” (Dijksterhuis & Nordgren, 2006, pp. 101). This principle states that consciousness is precise and that it may be good at making decisions when the problem is not too complex (Dijksterhuis & Nordgren, 2006). Furthermore, the capacity principle implies that conscious thought is not able to make good complex decisions, since it is constrained with the limited processing capacity (Dijksterhuis, 2004). Hence, conscious thought may be better in making simple decisions or decisions in which a minimal amount of information is provided. However, when the decision problem gets more complex, thus involves more information, the decision quality of the consciousness decreases.

Unconscious thought
In the previous section, the capacity principle regarding the conscious thought has been discussed. Also, the deliberation without attention effect, which is based on the capacity principle and the rule principle have been set out. In this section, the focus will lie in the unconscious thought.

Betsch et al (2001) have proven that unconscious thinking can deal with relatively complex evaluations. They concluded that the unconsciousness was able to process large amounts of information without the awareness of the consciousness. In contrast with the consciousness, which is constraint with a low processing capacity, the unconsciousness has a very high processing capacity. Therefore unconscious thought is able to concentrate on all information rather than just a part of the provided information. Furthermore, as what Dijksterhuis & Nordgren (2006) indicated in the Unconscious-Thought principle, the unconscious thought is
able to process high amounts of information, resulting in being able to assess and evaluate the importance of different attributes of objects in a relative objective way. Thus, unconscious thought is able to process infinite amounts of information and eventually form an objective summary judgment of all relevant information, resulting in information to be better organized in memory, which in turn leads to better decisions (Dijksterhuis & van Olden, 2005). According to the deliberation-without-attention-effect, the unconscious thought is able to make high quality decisions independent from the provided amount or complexity of information, resulting in the quality of unconscious decisions is always moderately good (Dijksterhuis & Van Olden, 2005).

3.3 Discussion
As previous research concluded, the processing capacity of the consciousness is limited and therefore results in poorer decision making. However, according to the deliberation-without-attention effect, the consciousness is able to make good decisions when exposed to a considerable small amount of information (Dijksterhuis & Nordgren, 2006). Nevertheless, conscious thought performed very poorly under complex situations, where the level of complexity is defined as the amount of information involved. Hence, conscious thought will make the relationship between information load and consumer decision quality stronger. That is, if the information load increases to an extent that it exceeds the processing capacity, the consciousness could have problems processing this increasing information load, which eventually could result in a decrease in decision quality.

In comparison with conscious thinking, unconscious thought improves the quality of decisions when people are faced with complex decisions. Therefore, unconscious thinking will make the relationship between the information load and consumer decision quality weaker. This is because of the fact that the unconsciousness is not constrained with the limited capacity, but is able to process infinite amounts of information and thus is able to make complex decisions.
4. General discussion

In this chapter an overall conclusion will be given as well as the limitations of this literature research and suggestions for future research. The first part of this chapter will deal with the conclusions that can be drawn from this literature research and the second part of the chapter will discuss the limitations of this literature study. Also, recommendations and suggestions for future research will be given in the last part of this chapter.

4.1 Conclusion

The problem statement introduced in this paper was: “What are the effects of information load on the consumer decision quality and how does the thinking mode influence this relationship?” Much research was conducted on what dimensions precisely determined information load and how information load influenced the quality of a consumer’s decision. Two different approaches were identified in literature, namely the traditional approach and the structural approach. Although the traditional approach produced inconsistent results, it can be concluded that this approach did have a significant contribution, namely the fact that if there exists an increase in the amount of attributes and alternatives, the decision quality decreases. In addition, the structural approach should not be seen as a competing paradigm, but rather as an extension of the traditional approach since the structural approach include the dimensions of the traditional approach. It can be concluded that the structural approach that includes the traditional measure of information amount can provide a clearer understanding of the information overload phenomenon. Also, the relationship between information load and consumer decision quality can be concluded to be negative. If the amount of information increases, the quality of the consumer’s decision will decrease.

The thinking mode, which consists of two modes of thought, the consciousness and unconsciousness, has a significant influence on the quality of decision as well. The consciousness suffers from a limited processing capacity, and can process information with a maximum of 7 chunks (Miller, 1956). The unconscious thought however, does not have this constraint and can process an unlimited amount of information. Research has pointed out that conscious thought is able to deal with simple decisions. The conscious thought is actually able to make good decisions when the amount of information involved is low, but when exposed to complex situations, thus a high amount of information, a decrease in decision quality occurs. In contrast with the consciousness, the unconsciousness can deal with complex situations and process an infinite amount of information. In this literature research, the thinking mode is the
moderating variable, and it can be predicted that conscious thought will make the relationship between information load and consumer decision quality stronger, whereas unconscious thought will make the relationship between information load and consumer decision quality weaker.

4.2 Limitations
There exist several limitations in this study, besides the fact it being a literature study, conducted based on previous studies covering this topic. Due to the short time frame given to conduct this study, this research only focuses on several dimensions that determine information load on consumer decision quality. Also, there are more factors that can be taken into consideration in affecting consumer decision quality. As this research mainly focuses on product information (e.g. product attributes, product alternatives), no other factors were considered, such as how information is presented and the information format.

Experiments conducted in earlier studies were used to explain the effects and relationship of the different variables. However, the findings of these previous studies are from experimentally controlled settings. Only the variables researched were included in the experiment, whereas other factors that could influence this relationship were left out. In the real world, decision makers depend on more factors regarding their decisions, for example, consumer’s prior knowledge and experience of a certain product category. This prior knowledge and experience could change the way of how consumers process their information.

Furthermore, previous researchers only focuses on one certain product while conducting the experiment, for example strawberry jam (Wilson & Schooler, 1991), Calculators (Lurie, 2004), Apartments (Dijksterhuis, 2004). Focusing on one certain product could result in the difficulty to generalize these results of those studies to other product categories.

4.3 Suggestions for further research
The latest research conducted about the effects of information load and consumer decision quality has been almost a decade ago. The first researchers which started to research this phenomenon, started out in the 1970’s. The research covering this topic is outdated. Therefore, collecting new accurate data regarding this topic is recommended. Furthermore, due to the high growth of internet usage over the last years, and the increase of the information environment, new factors could have been arisen in determining information load. In addition, as stated in the previous section, factors such as how information is presented and information
format could be important as well in determining information load. A suggestion for future research is to include these factors in the research.

As mentioned in the previous section, researches that have been conducted in this field were restricted to one specific product category. Future research could include several different product categories in order to be able to generalize and validate the results.

Also, several predictions are derived from the literature study whether thinking mode has a significant influence on the relationship between information load and consumer decision quality. But future empirical research is needed to prove the predictions made in this thesis.
References


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