Macrothink Institute™

Journal of Social Science Studies
ISSN 2329-9150
2023, Vol. 10, No. 1

Implicit Evaluation Mechanisms in Marketing Research: an Overview of Formation and Measurement of Implicit Attitude

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Received: January 19, 2023 Accepted: March 1, 2023 Published: March 15, 2023

doi: 10.5296/jsss.v10i1.20680 URL: https://doi.org/10.5296/jsss.v10i1.20680

Abstract

For a long time, examining the subtle and unintended effects of people's social environments on their thoughts and behaviors has been a central goal of social psychology researchers. Advances in social psychology have proven the importance of studying not only the conscious mechanisms of humans but also the "implicit" and "automatic" ones. Researchers in social psychology distinguish explicit attitudes, evaluations resulting from an introspective effort, from implicit attitudes, automatic evaluations of which the individual may not be aware. Cognitive psychology researchers have already proven that implicit beliefs are much more important in decision-making than explicit beliefs even in what might be considered rational and/or scientific realms. Greenwald and Banaji (1995) introduced the term implicit social cognition to describe cognitive processes that occur outside of human consciousness. Implicit social cognitions were initially applied to psychology, but they are beginning to be introduced in other disciplines, notably in marketing. This article aims to provide a conceptual framework of the implicit attitude and its measurement tools through a

multidisciplinary theoretical exploration. Therefore, the research method used in this paper is the analysis of the classic literature. This paper summarizes the arguments and counterarguments within the scientific discussion on the issue of implicit mechanisms in the marketing field. This review theoretically proves that the study of implicit social cognitions is a field of research with many challenges, particularly related to consumer behavior analysis because it allows marketers to understand influences unknown to the subject himself.

Keywords: cognitive processes, conscious processes, implicit beliefs, implicit social cognition, neurosciences

1. Introduction

If the eras of psychological research have always been marked by the notion of deliberate reasoning, the present, and future eras will probably be marked by the notion of automaticity. Previously, it was believed that many aspects of human behavior came from deliberate reasoning processes. While today, these aspects are considered to be the result of uncontrollable processes operating below the threshold of consciousness (Bargh, 1997; Moors & De Houwer, 2006). The development of the controversy in socio-cognition was revealed, strongly, with the insertion of the new field of research on the unconscious processing of information by invalidating the theory of rational choice which considers the individual as being active and rational in his decisions. Aware of the limits of explicit studies, marketing experts today seek to study human behavior by focusing on the implicit mechanisms of cognitive processes. One of the most important notions that marketers work on in the sense of implicit studies is the attitude or in other words the assessment of a product or a brand. This assessment was formerly studied from an explicit point of view, while more recently there has been an attempt to detect attitudes below the threshold of consciousness when they are likely to be distorted through desirability or social norms. Two types of processes distinguish the two possibilities of attitude activation described above: automatic and controlled processes (Schneider & Shiffrin, 1977). Shiffrin and Dumais (1981) described automaticity as *« any process that leads to the activation of a concept or response each time a given set of external initiating stimuli is presented, regardless of the attempt of a subject to ignore or circumvent the distraction »*. Due to the growing abundance of explicit measures, studies on implicit attitude and its new measurement tools are experiencing important and continuous development (Petty et al., 2009). This field of research is part of a very precise conceptual and methodological framework, which is that of automatisms and the unconscious. This article aims to present one of the key concepts of implicit cognition such as implicit attitude as well as its impact on consumer behavior and its various measurement tools.

2. Literature Review

2.1 An Integrative Review of Explicit and Implicit Mechanisms of An Attitude

2.1.1 Explicit Process Vs Implicit Process

In its simplest definition, an attitude refers to an assessment of an object in our social or physical environment (Girandola & Joule, 2013). There are attitudes about abstract, concrete things, individuals, or even categories of objects. These attitudes allow individuals to quickly

maintain their judgments and adapt to their environment by learning behaviors, values, beliefs, and affections. According to Fazio and his colleagues, an individual's attitude can be considered as a simple association between a given evaluation and an object (Fazio et al., 1982; Fazio et al., 1983; Powell & Fazio, 1984). Attitudes, considered to be part of long-term memory, are initiated when the object of attitude is encountered (Bohner et al., 2008). For this, several researchers consider the attitude as stable and stored in memory (Fazio, 2007; Petty et al., 2007), as well as others, consider that they depend on the context and on the information that individuals have at a given time (Schwarz, 2007). However, recent advances relating to its conceptual definition have been little learned in marketing and the accepted meaning adopted in a consensual manner by researchers in consumer behavior remains that proposed by Fishbein & Ajzen (1975): "predisposition to evaluate in a certain way (positive or negative) a product or a brand". Unlike the meanings with which they are used in everyday language, behaviors and attitudes correspond to very different realities.

Studied for over fifteen years, the notion of implicit attitude has attracted renewed attention and interest among social psychology and marketing researchers, due to the importance of implicit evaluation mechanisms in human behavior and the limitations of explicit measurements, as well as recent advances in cognitive neuroscience (Greenwald & Banaji, 1995). When a person quickly expresses an attitude toward a brand or product, it is sometimes different from the attitude expressed more deliberately. In recent years, researchers in implicit socio-cognition have studied this double attitude and shown the role and importance of automatisms in judgments. Indeed, the attitude in its implicit form can automatically guide behavior (without the subject being aware of it), because it provides a filter through which the object-generating attitude is evaluated when it is encountered (Ackermann et al., 2010). Therefore, attitudes can affect behavior through two distinct processes: automatic and spontaneous, and deliberate and controlled. Automatic processes are rapid, non-conscious, non-verbalizable, involuntary, reflexive, and difficult to intentionally prevent (irrepressible) and can be performed concurrently with other activities in response to particular stimuli. They are often performed outside of consciousness. For this reason, they are often considered unconscious (Fodor, 1983; Perruchet, 1988; Posner & Snyder, 1975).

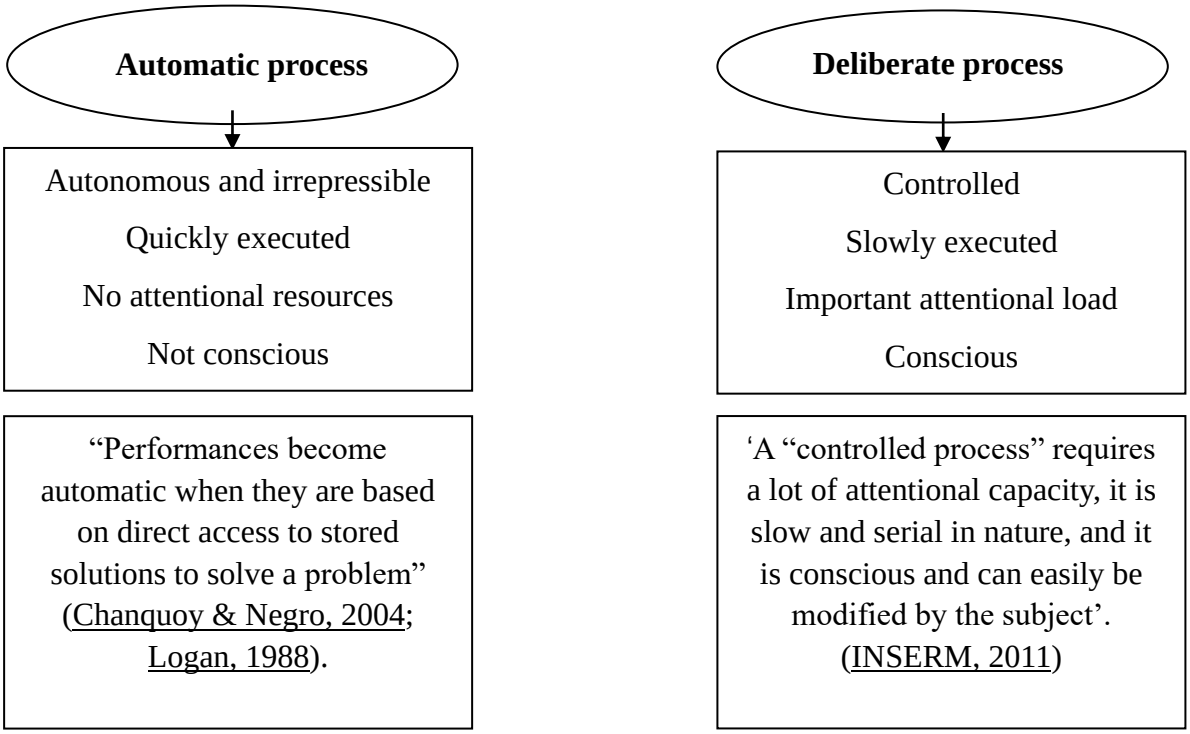

Figure 1. The characteristics of an automatic and a deliberate process, Chanquoy & al. (2007)

Source: developed by the authors

A process is "spontaneous" when it is based on automatic and unconscious activation of preexisting attitudes, it is activated mainly when behaviors are rapid and little thought out, and this is the case with most everyday consumer purchases. The second process, called "deliberate", requires a certain motivational force, time, attention, and cognitive resources to analyze the available information. Indeed, even while an explicit attitude is stored in memory, the implicit attitude has a significant impact on the implicit and uncontrollable responses that individuals do not perceive as an expression of their attitude and do not make an effort to regulate. The individual having dual attitudes in his memory does not feel a particular and subjective state of conflict; he reports the attitude which is the most accessible (Ackermann & Mathieu, 2015). As a result, when confronted with the attitude object, attitude activation can occur spontaneously or requires a conscious and more reflexive effort. Wilson & al. (2000) suggested that dual attitudes toward the same social object are both stored in memory.

2.1.2 Implicit Memory

The appearance of an automatic process necessitates the existence of a set of previously learned associations or responses. Therefore, the existence of an attitude certainly requires the existence of memory. Memory is a storage base for information and past experiences. '*Knowing what the capital of Norway is, knowing how to drive a car or play chess, remembering the title of the last book read and don't forget to return it to the library on the due date ... All this concerns memory, or rather memories corresponding to distinct systems'* (Tulving, 1985). The psychological process called memory is responsible for storing information, knowledge, and learning, both motor and cognitive. Memory is also responsible

for encoding, storage, and retrieval processes. Encoding refers to operations that transform the stimulus into a mental representation. Storage designates the preservation of these representations and their temporal evolution because the individual's daily experience modifies and affects the contents of his memories. Recovery refers to operations that enable the content of the memories to be activated (Rossi, 2005). Psychologists distinguish different categories of memories. Sensory, short-term, and long-term memory are the three categories of memory that people typically have (Holden, 2021). Based on duration and storage capacity, they describe temporary memories as registers of sensory information, short-term memories as working memories; and permanent memories as long-term memories. Permanent does not mean definitive but designates a memory whose duration exceeds a few minutes to reach several years or decades (Rossi, 2005). Memory performs both a short-term record of information and a permanent record of what is learned. In sensory memory, information associated with the senses is stored briefly (for a fraction of a second) for processing. Then, a limited part of this knowledge is stored in short-term memory (Holden, 2021). Conscious processing, or consciously thinking about what has happened, occurs in short-term memory. Information from sensory inputs is then discarded or processed to be stored in long-term memory. Information from short-term memory can be kept in long-term memory for long periods. Long-term memory stores information as a network of patterns that are later turned into knowledge structures (Holden, 2021). There are two types of long-term memory: explicit memory and implicit memory (Cowan, 2008).

According to Graf and Schacter (1985), remembering involves the deliberate retrieval of knowledge about specific experiences, but this assumption contradicts the outcomes of studies that examined performance using assessments that did not refer to specific experiences. In these tests, memory doesn't need to be accompanied by a conscious memory. Consequently, there are two types of memory: working memory and long-term memory (Squire & Dede, 2015). Long-term memory can be divided into declarative (explicit) memory, revealed whenever executing an action calls for the cognitive recall of previous events, and non-declarative (implicit) memory, revealed when task performance is assisted by the lack of conscious memory and includes habits, skills, primers and simple forms of conditioning (Graf & Schacter, 1985; Squire & Dede, 2015). Depending on whether implicit memory is considered to be equivalent to unconscious memory or indirect memory, researchers are inevitably confronted with several conceptual and operational problems directly related to the role of consciousness in implicit memory. Unlike explicit memory, implicit memory, therefore, does not refer to "the experience of remembering" (product of the retrieval process) which can therefore only be associated with the traditional tests of recall, recognition, and explicit judgment (Serge, 1994). According to Graf and Schacter (1985), an implicit memory task can be facilitated in the absence of conscious memory; this means that the subject is not aware or realizes that the responses he has produced are the immediate consequence of his activity carried out during a previous study phase. Existing literature suggests that individuals can use previously learned information when performing a subsequent task, even if the retrieval of this information is done without conscious reasoning (Lee, 2002).

2.1.3 Priming Paradigm

Priming is considered a powerful technique in cognitive and social psychology because it reveals how the present and future behavior of an individual can be influenced by his past experiences (Doyen et al., 2014). Priming is the perception of a stimulus called the prime that causes a change in the processing of another stimulus, called the target (Gaillet-Torrent, 2013). The modification of the treatment of the target can go through the activation of high-level representations linked to the primer (Schneider & Shiffrin, 1977) and lead to a modification of the behavior, thus without forgetting that the processes involved in this operation occur unconsciously. A primer, as well as a target, can be part of any sensory modality and have an impact on a wide variety of behaviors (Gaillet-Torrent, 2013). According to literature in cognitive and neuropsychological sciences, priming represents the functioning of implicit or unconscious processes. Priming is generally defined in the existing literature as a form of non-conscious memory (Stevens et al., 2008) and it takes many forms. Repetitive priming makes the treatment more efficient when an individual encounters a stimulus for the second time. Semantic priming allows the activation of other related concepts and priming by the objective allows the triggering of an associated objective. Priming contributes to several human behaviors, such as memory, perception, decision-making, and action (Doyen et al., 2014).

Priming is studied differently by cognitive psychologists and social psychologists. Cognitive psychologists use the priming technique to study the structure of knowledge representations. But as the authors study the implicit mechanisms of an attitude, they are interested in the studies of social psychologists who generally use priming in their research to analyze the influence of mental representations on judgments and beliefs in the real world (Doyen et al., 2014). It is assumed that the perception of a stimulus, processed intentionally or not, can trigger mental representations and influence attitudes and behaviors (Blair, 2002; Dijksterhuis & Bargh, 2001; Wheeler & DeMarree, 2009).

2.1.4 Behavioral Priming

In a demonstration by Bargh et al., (1996), respondents were asked to choose an odd word from a set of scrambled words, which when combined formed a phrase. Unknown to the group of respondents, the term omitted from the sentence was associated with the status of "being old". At the end of the experiment, persons who had been exposed to words associated with "old age" walked more slowly outside the laboratory than those who had not. The objective was therefore to measure the walking speed. In the absence of consciousness, activating a trait concept such as "being old" was enough to produce behaviors, as Bargh et al., (1996) have effectively proven (Doyen et al., 2012). In addition, it is claimed that the effect of the exposure occurred without consciousness, as the participants did not notice anything during the experiment. Through this demonstration, Bargh & al (1996) were able to show that priming can occur automatically and influence behavior without consciousness. Behavioral priming is a technique that can incidentally activate a concept in an individual's brain, thereby causing the behavior to occur in accordance with what has been activated (Bargh & al., 1996; Doyen et al., 2012). This technique is supposed to occur without the individual being conscious of the

influence of the primer on his responses and without intending to adopt the activated behaviors (Loersch & Payne, 2011; 2014). The unintentional activation of concepts by the priming technique influences various behaviors, including pro-social behaviors (Shariff & Norenzayan, 2007; e.g., Custers et al., 2008; Daveau, 2018). Among the experiments carried out in this direction, the example of the spontaneous help situation can be cited, the incidental activation of words linked to the concept of help promotes a helping behavior towards a comrade who drops pens (Macrae & Johnston, 1998; Daveau, 2018). In another experiment, subjects were placed in a room and were exposed to images of the library, as a place in which one must be silent. Then, in a word pronunciation task, the sound pressure level of their voices was measured in decibels. After the measurements, it was found that participants who were exposed to library images spoke less loudly than those who had not been exposed to them, even though they were not actually in a library (Aarts & Dijksterhuis, 2003). Through these experiments, it can be concluded that high-level cognitive functions, considered to require the intervention of consciousness, could operate without consciousness and that behavioral priming can influence complex behaviors, mobilizing high-level cognitive processes (Daveau, 2018).

2.2 Impact of Implicit Attitudes on Human Behavior

The MODE model proposed by Fazio (1990) proposes that Motivation and Opportunity Determine whether attitude drives behavior through a deliberate or a spontaneous process. This model postulates that attitudes guide behavior through two types of processes that can operate alone or in interaction. The first process, called “deliberate”, requires time, strong motivation, attention, and cognitive resources. The second process takes place spontaneously and is based on the automatic and unconscious activation of pre-existing attitudes. This process is activated mainly when behaviors are rapid and poorly thought out. In a deliberate process, the individual analyzes the usefulness of future behavior by examining in detail the cost-benefit ratio. This situation arises when the behavior is strongly involved. Therefore, the association between attitudes and behavior involves automatic and controlled components (Courbet & Fourquet-Courbet, 2014). In a framework governed by implicit mechanisms, the question that arises is how the activation of the attitude guides behavior according to an automatic process. According to Fazio (1990), the individual interprets the situation he is confronted with when the attitude stored in his memory is automatically activated and therefore his behavior is guided in front of this situation. Based on Fazio's (1990) model, Ackerman and Mathieu (2015) argue that implicit attitude influences behavior through a five-step process:

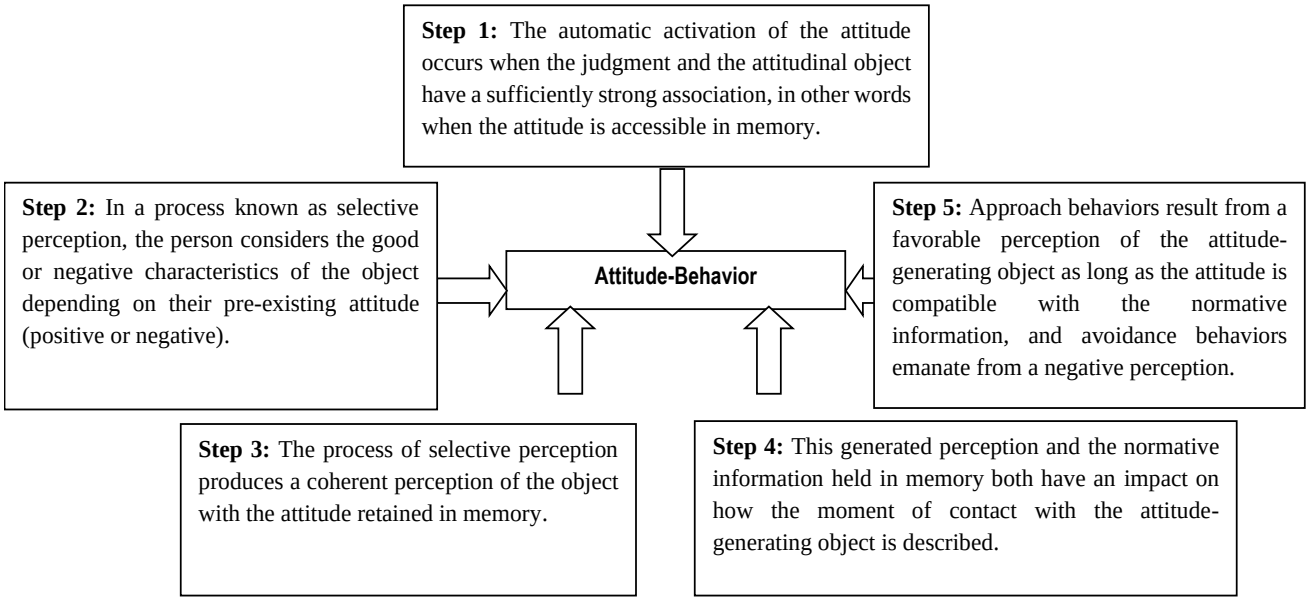

Figure 2. The process of influence of implicit attitude on human behavior

Source: developed by the authors based on (Ackerman and Mathieu, 2015)

In an experiment conducted by Fazio and Williams (1986), three voters were asked how much they agreed with the phrase "a good president for the next four years could be Ronald Reagan" by measuring their response time. A few weeks later, the same individuals were asked to give their perceptions after a debate between Reagan and his competitor. It appears that the responses of the subjects who had the most accessible attitudes were more consistent than those who had the least accessible attitudes. Subjects with a strongly approachable attitude thought their candidate had been the best during the debate, and they voted for him as well. So, the more the attitude is obtained in memory, the faster the response would be, and therefore the stronger the link between it and the behavior would be (Courbet & Fourquet-Courbet, 2014).

2.3 Explicit and Implicit Measures of An Attitude: What are the Differences?

Traditionally, the measurement of explicit attitudes is done through questionnaires and self-report data (Petty et al. 2009). Due to their crucial psychometric requirements, such as efficacy and utility, self-report surveys (Likert-type scale or semantic differential scales) are the most widely used methods for explicit attitude measurements in the field of consumer behavior (Mischel, 1968; Jacoby et al., 1992; Brunel et al., 2004). The semantic differential technique allows attitude statements to be scored on a 7-point scale between polar adjectives (e.g., unsatisfied-satisfied) (Baxter et al., 2015), in contrast, Likert scale allows respondents to determine the extent to which they agree or disagree with a statement. Q-sort is a different explicit attitude assessment technique that is less frequently used. In this procedure, a large number of statements are offered to the individual (Glock & Kovacs, 2013). During the experiment, the participants are given cards with statements that they must categorize according to their similarity with themselves ("like me" vs "unlike me") in a succession of sorting tasks. Unfortunately, this technique cannot stop respondents from describing their

preferences following a desired social pattern despite claiming to exclude social desirability bias by avoiding measurement scales (Stephenson, 1935).

Through a questionnaire or another explicit method, individuals do not express what they think; therefore, to avoid the biases linked to verbalization and to take into account unconscious factors, it is essential to put in place implicit methods. The use of implicit measures has grown dramatically since the late 1990s. This sudden development can be explained by the publishing of an implicit measures test on the Harvard University website (www.implicit.harvard.edu) which allowed more than 4.5 million tests to be passed (Dion & al, 2008). Implicit measurements depend on the automatic restitution of information stored in memory, they are based on memory maps which present how the different elements are stored in memory (De Houwer & Moors, 2007; Dion & al, 2008).

Table 1. Advantages and disadvantages of implicit measures

Advantages	**Disadvantages**
• Impossibility of formatting the spontaneous responses of the consumer to the expectations of his environment • Consideration of unconscious effects	• The time horizon for data collection is longer • Collection, only on the computer • Collection restricted to the laboratory

Source: developed by the authors based on (Dion & al, 2008)

Taking into account implicit measures improves the prediction of consumers' judgments and choices, especially when they are not very involved or when they have to make a choice under the pressure of time. Implicit measures also provide the opportunity to estimate consumers' implicit attachment to brands and measure how strongly they are linked to self-concept (Dion & al, 2008).

2.3.1 The Implicit Association Test Procedure

Contrary to explicit measures, implicit measures focus on calculating reaction times to evaluate the activation of automatic attitudes (Fazio & Olson 2003; Wittenbrink & Schwarz 2007). Formed from implicit cognitive and emotional processes, implicit attitudes can only be identified by indirect techniques such as the study of response times, forced choices, or techniques that link implicit attitude and explicit attitude in opposition (Greenwald & al. 1998). The implicit association test (IAT) is one of the most widely used procedures for testing implicit attitudes (Fazio & Olson, 2003); it was initially introduced by Greenwald & al. (1998). The primary goal of the IAT is to compare the variations in reaction times between congruent and incongruent associations (Snowden et al., 2004). The IAT is therefore a similar technique to an evaluative priming task through which the assessment automatically generated by the attitude object is measured. Greenwald & al. (1998), as the first creators of the operating procedure and the algorithm for calculating the IAT (Ackermann & Mathieu, 2015), showed that the compatible association leads to shorter response times than the incompatible association.

The implicit association test extends priming and measures the relative association of two sets of concepts in the consumer's mind (Zaltman, 2003). By choosing two concepts (for example 'African', 'European') and an attribute for each concept, one positive and the other negative (for example 'good', 'bad'), a group of respondents are invited to categorize the stimuli depending on whether they correspond to one of the concepts, and one of the attributes. The manipulation of

the material is done in the following way, on a computer, a key is designated on the left side of the keyboard to categorize the stimuli corresponding to a concept or an attribute, for example, "African" or "European" and a key to the right for stimuli corresponding to the other concept or attribute for example “European” or “Bad”. The second step consists of another categorization task, which is characterized by using the keys in reverse to categorize the concepts by pressing the left key for stimuli corresponding to “European” or “Good” and the right key for stimuli corresponding to "African" or "Bad". The attitude is therefore measured as a function of the execution time of each task, if the task is executed faster when "African" and "good" are linked than when "European" and "Bad" are linked, it is concluded that the implicit attitude is more favorable towards African than towards European. The IAT score is comparable to a difference in means; it is calculated by comparing the response times of each of the tasks, combined, initial combined, and reverse combined (Ackermann & Mathieu, 2015).

Trendel and Warlop (2004) used the implicit association test for two cigarette brands "Lucky Strike" and "Camel". The lucky strike was for half of the consumers presented as the official sponsor of the Roland-Garros tournament and for the other half, Camel was presented as such. Therefore, the IAT was utilized to determine the degree of association of these two brands with pleasant and unpleasant words, in order to see if the brands were spontaneously perceived more favorably when they are partners in the Roland-Garros tournament

Table 2. The implicit association test procedure for two cigarette brands "Lucky Strike" and "Camel"

Tasks	**Task objective**	**Instructions**
Task 1 Training	Categorization of concepts	“Press left for Camel” “Press right for Lucky Strike”
Task 2 Training	Attribute categorization	“Press left for unpleasant words” “Press right for pleasant words”
Task 3 Training	Combined task 1	“Press left for Camel and unpleasant words” “Press right for Lucky Strike and pleasant words”
Task 4 Test	Combined task 1	“Press left for Camel and unpleasant words” “Press right for Lucky Strike and pleasant words”
Task 5 Training	New categorization of concepts	“Press left for Lucky Strike” “Press right for Camel”
Task 6 Training	Combined task 2	“Press left for Lucky Strike and unpleasant words” “Press right for Camel and pleasant words”
Task 7 Test	Combined task 2	“Press left for Lucky Strike and unpleasant words” “Press right for Camel and pleasant words”

Source: developed by the authors based on (Trendel & Warlop, 2004)

Physiological measures are also part of the implicit measures used for a long time in marketing (Trendel & Warlop, 2005). For example, pupil dilation (Trendel & Warlop, 2005), and minimal activation or contraction of facial muscles imperceptible to the naked eye may reflect valence (negative or positive) and intensity of attitude (Girandola & Joule, 2013). The measurement of brain activity is also used (Ito & Cacioppo, 2007; Cunningham et al., 2009). There are different implicit measurement techniques, but their common vocation is the evaluation of attitudinal responses, without the person being aware that the attitude affects their response (Wittenbrink & Schwarz, 2007)

Table 3. Overview of some studies carried out using IAT

Study	**Research contribution**
"Is the Implicit Association Test a Valid and Valuable Measure of Implicit Consumer Social Cognition?" Brunel & al, (2004)	IAT improves understanding of consumer responses when they can't or won't identify what's influencing their behaviors.
"Predictive Validity of the Implicit Association Test in Studies of Brands, Consumer Attitudes, and Behavior". Maison & al, (2008)	The study's findings demonstrated that using IAT improved behavior prediction compared to using simply explicit attitude assessments.
"The mere association effect and brand evaluations". Dimofte and Yalch, (2011)	An association between two items linked by a perceptual similarity might be initiated by the mere presence of one of them, affecting both the implicit and explicit attitude.
"Measuring self-esteem using the Implicit Association Test: The role of the other". Karpinski, (2004)	The study's findings call into question the use of the IAT and its interpretation as a measure of self-esteem.
"Can Evaluative Conditioning Change Attitudes Toward Mature Brands? New Evidence from the Implicit Association Test". Gibson, (2008)	The results of this study showed that taking into consideration the implicit attitude in conditions of low cognitive abilities significantly improves the predictive character of the explicit attitude.
"Consumer Response to Polysemous Brand Slogans". Dimofte & Yalch, (2007)	Polysemous advertising slogans are treated using both a conscious cognitive process and an instinctive approach.
"The contribution of implicit cognition to the Theory of Reasoned Action Model: A study of food preferences". Ackermann and Palmer, (2014)	According to the findings of this study, the disjunction between an individual's implicit and explicit attitudes influences his behavior when he has an internal psychological conflict.

Source: developed by the authors

2.3.2 Validity and Reliability of Implicit Measures

Trendel and Warlop (2005) postulated that the test-retest reliability results obtained by Meier and Perrig (2000) were significantly lower for perceptual implicit measures ($r<0.29$) compared to explicit measures ($r>0.43$). In the results of Buchner and Wippich (2000), it's mentioned that this low level of reliability is due to the great variability of the possible answers during an implicit memory test compared to an explicit memory test. Regarding the validity of implicit

measures, Perruchet & Baveux (1989) obtained poor convergent validity for four measures of perceptual implicit memorization due to involuntary conscious recall for two measurements. According to the results of Cunningham & al, 2001, the bivariate correlations between implicit attitude measures can be weak ($r \approx 0.9$). The inability to find correlations between the implicit measures increases researchers' concerns about the validity of the implicit attitude measure. Trendel and Warlop (2005) postulated that a reasonable level of reliability was obtained in several IAT and priming studies (average r of 0.6 and an average Cronbach's alpha of 0.8 for the TAI and an alpha of Cronbach of 0.64 for affective priming) (Asendorpf & al, 2002; Brunel & al, 2004; Cunningham & al, 2001). Regarding the criterion validity of IAT effects, Greenwald and Farnham, (2000) showed that self-esteem IAT effects predicted subjects' reactions to positive or negative feedback (Chassard, 2006).

Phelps & al. (2000) were able to prove a relationship between white-black IAT effects and the intensity of amygdala activation perceived on MRI when a black face is presented to the subject. Studies on the predictive value of IAT effects are being carried out more and more numerous and their results are encouraging. Therefore, it can be concluded that the IAT effects would indeed make it possible to significantly predict several criteria such as judgments, physiological responses, and behaviors in all the domains taken into account ($r \approx .27$) but to a lesser extent than the corresponding direct measures ($r \approx .35$) (Chassard, 2006).

3. Conclusion

An individual takes four seconds on average to choose a product in a supermarket. The choice processes are therefore for the most part very simple and individuals often make their choices from memorized elements which they restore in a more or less conscious and automatic way. To better understand customer decision-making processes and attitudes, it is essential to try to identify the elements stored in memory and understand their mode of storage (Dion & al, 2008). For many psychologists, the implicit attitudes measured using priming or the association tests reflect the actual beliefs of the individual and more accurately predict their behavior. Consumers may sincerely believe in what they claim, or they may be unaware of the opposing forces driving their behavior (Zaltman, 2003). Indeed, the behaviors of individuals are not only influenced by conscious cognitive processes but also by spontaneous processes (Ackermann & Mathieu, 2015). Through this review article, the concept of implicit attitude and its contribution to the consumer behavior field were first targeted. Secondly, the most widely used implicit measures were described, although the majority of work carried out within the framework of implicit measures in marketing does not relate to the concept of implicit attitude, but only to the properties of the implicit measures. The development of research on implicit evaluation mechanisms will allow companies to correct managerial and marketing strategies in order to optimize the acceptance of innovations, taking into account all the predictive aspects of consumer behavior.

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