Consumer inferences and consumer preferences. The status of cognition and consciousness in consumer behavior theory

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This conceptual paper discusses the so-called 'non-cognitive' revolution in modern Consumer Behavior Theory. We argue that this new emphasis is not a radical departure when viewed from the vantage point of cognitive psychology. Cognitive psychology has become a way of studying many, if not most, forms of behavior; as it grows and expands, it becomes less correct to equate it with the study of only some forms of behavior (cognition). It is often the case that consumer researchers associate the term 'cognitive' with the conscious, the rational, the verbal and, by implication, call non-cognitive the unconscious, subconscious or non-verbal phenomena. However, many findings on 'non-cognitive' processes are the result of research in cognitive psychology. Our paper therefore starts out by discussing the nature of the cognitive Consumer Research Tradition. It points out that the distinction between conscious and automatic processes is more fruitful than that between cognitive and non-cognitive ones. The recent emphasis on emotional processes and direct behavior manipulation is discussed in this light. Implications of the distinction for consumer and marketing research are mentioned in a concluding section.

1. Introduction

Consumer research, a multidisciplinary and applied field, reflects the shifting emphasis in the disciplines from which it borrows. Following a decade of consumer studies inspired by remarkable advances in cognitive psychology, present-day consumer research echoes the attention paid by psychologists to the limitations of conscious human information processing and to the non-cognitive determinants of action (Kassarjian (1982)). The focus on emotion or on behavior is not new for consumer research: Thirty years ago motivation research stressed the subconscious emotional foundations of behavior (Dichter (1964)); twenty years ago, the fashion was to model choice in a behavioristic way (Massy, Morrison and Montgomery (1970)). Have we then come full circle? While there is an inevitable swing of the pendulum, we argue that the movement is evolutionary. We return to our old interests enriched with the knowledge acquired during the previous 'excursions'. Since the field of consumer research is noted for embracing new approaches with zeal and for burning the bridges left behind, this paper pleads for continuity.

Such continuity is apparent from our acceptance, in the first paragraph, of the time-honoured distinction between the cognitive, the affective and the conative aspects of behavior. This distinction is deemed useful, even though purely conceptual. The problem of understanding behavior then appears as that of the determination of these aspects and of their interrelationships. A paragraph is devoted to the presentation of conscious and of automatic processes as the two (extreme) types of the determination of behavior. Cognition has been closely linked to conscious processes in consumer research. The too restrictive conscious cognitive approach is detailed and its ecological validity is questioned.

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The importance of less conscious cognitive processes is simultaneously stressed.

The three next paragraphs are devoted to affect and conation which have again moved to the fore since Zajonc's seminal paper (1980). A last paragraph draws conclusions for the field of Consumer Behavior Research, both in terms of its theory and of its methods.

The main purpose of this paper is to bring the various facets of consumer behavior (cognitive, affective, conative; conscious and unconscious) in better perspective. As a consequence, we argue that more attention needs to be given to the non-cognitive and to the less conscious aspects of consumer behavior than before. But this shift in attention should not lead to the banishment of that which is cognitive and conscious in its object, theory or method. The cognitivistic excursion has taught us much about consumer behavior and allows a better study of 'non-cognitive' determinants than before.

2. Cognition, emotion and conation: Putting Humpty Dumpty back together

Psychology attempts to describe and explain individual behavior. In scientific work it is useful to make conceptual distinctions between aspects, components of the object under study. In our case, the time-honoured distinction is between the cognitive (knowing), the affective (feeling) and the conative (acting) aspects of behavior. These concepts are inferences drawn from the same, holistic, observable behavior; such constructs exist in the eye of the beholder only as distinct abstractions from the phenomena. Scientific inquiry is furthered by this conceptual separation, but difficulties arise when it becomes necessary to integrate the constructs, e.g., for applied research or practice. The problem has been referred to as that of 'Putting Humpty Dumpty back together' (Coyne (1982)). The integration is rendered even more difficult by our natural tendency to equate the constructs with physiological functions and processes (Ryan (1982)) or with their measurement operationalization.

Supposedly, the most adequate definition of concepts such as cognition, emotion and conation can be found in psychological encyclopedias. Yet, the definitions found in some respected dictionaries of psychological terms [1] do not always succeed in giving mutually exclusive descriptions of these constructs. A reason for this finding is that the definitions are of constructs which belong to an integrated structure; as we have just remarked, conceptual distinctions are not usually suited to express integration. Once in a while, scientists have to frame a neologism in order to overcome the limitations built in their categories, e.g., the recent concepts of cold and hot cognitions. The idea of integrated response units of knowledge, feeling and action tendency, which are internally coherent but may externally co-exist in relative isolation is of course quite old (Ajzen and Fishbein (1980)). The tricomponent view has dominated

[1] In Wolman (1973) we find the following definitions: Cognition: (1) a general term for any process which allows an organism to know and be aware; it includes perceiving, reasoning, conceiving, judging; and (2) a postulated stimulus-stimulus association or perceptual organization thought to account for expectancies of an organism. Emotion: A complex reaction, consisting of a physiological change from the homeostatic state, subjectively experienced as feeling and manifested in bodily changes which are preparatory to overt action. Conation: The aspect of personality characterized by conscious, willing strong and purposive action. Other definitions are found e.g., in Eysenck, Arnold and Meili (1982): Cognition: Every process by which a living creature obtains knowledge of some object or becomes aware of its environment (perception, discovery, recognition, imagining, judging, memorizing, learning, thinking); knowing, as distinct from volitional or emotional processes; the product of cognizing or knowing. Emotion: A complex state involving heightened perception of an object or situation, widespread bodily changes, an appraisal of felt attraction or repulsion, and behavior organized toward approach or withdrawal. Conation: A term for purposive mental drive or striving toward action; conative forces can appear as 'blind impulse' or as purposeful effort.

most marketing thinking about attitude-structure, -formation and -change (Day (1973)). More significant, insight-stimulating and newer for consumer research is the demonstration that such response units can act or be acted upon unconsciously, i.e., outside of focal attention, automatically. Indeed, evidence of various sorts is available for unconscious phenomena such as:

- Unconscious meaning effects on automatic response, where unattended stimuli have an impact on emotion through their meaning, e.g., psychogalvanic response to unattended or to subliminally presented conditioned stimuli (Corteen and Wood (1972)).
- Unconscious activation of motor responses as the result of mental or of emotional processes, e.g., the production of facial expression, of covert myographic activity related to thought of associated motor activity (Caccioppo and Petty (1981)), and the production of involuntary behavior in general states of absorption such as watching a dramatic production (Natsoulas (1981)).
- Unconscious activation of evaluation through motor behavior as e.g., in the Wells and Petty (1980) headphone experiment.
- Unconscious activation of meaning, whereby unattended stimuli seem to prime related meaning nodes in long term memory, e.g., the Stroop effect, the disambiguation of words or sentences with multiple meanings through unattended disambiguating stimuli (Marcel (1980)).

This array of findings on unconscious effects is not presented here in order to reject the view of the conscious and cognitive consumer in favor of a view where he is mindlessly driven by subconscious emotions. Rather, the significant conclusions are (1) that behavior is always cognitive-affective-conative instead of exclusively cognitive, or emotional, or conative, and (2) that behavior can be so at the conscious but also at the unconscious level. The first conclusion thus does not lead to the rejection of the cognitive approach, but embeds it in a broader perspective. The second conclusion allows a better discussion of what has come to be known as 'low involvement consumer behavior' (Houston and Rothschild (1978)). The concept of involvement however has proven elusive to define and measure. The artificial dichotomy between low and high involvement is related to that between the two basic modes of consciousness mentioned by Hilgard (1980): The passive receptive states, reminiscent of Krugman's description of a passive consumer watching an active medium (TV), and the active productive mental activities illustrated by the (active) reader of a newspaper (passive medium) looking for specific information. The distinction between automatic and controlled processes made in psychology can also be of help in this respect.

3. Automatic and controlled processes

Recent advances in cognitive psychology provide better insight in the nature of, and distinction between, the conscious and unconscious modes of functioning of the consumer. The distinction between automatic and control processing is conceptual, an abstraction (it will lead to a new Humpty Dumpty Problem in due time). [2]

Several authors venture descriptions of automatic and of control processes in terms of multiple characterizations (Vandenbergh and

[2] While the existence of automatic processes is generally accepted, their nature and the limit between automatic and controlled processing is subject to discussion. The debate can be followed e.g., between Kahneman and Shiffrin/Schneider (Kahneman and Treisman (1984)). The former, while accepting the idea of automaticity in principle, seems to argue that attentive processes are too easily discounted in favor of unattentive ones and that our models of attention, perception and memory are still inadequate.

Eelen (1983), Schneider et al. (1984)). Control processes are those where we are conscious, aware or attentive. They are flexible, conditional. They seem to require capacities which are of limited availability and thus cannot easily be carried out in parallel.

Automatic processes are unconscious, unaware (even though some of them, e.g., car driving, can be brought to awareness). They are unconditional inflexible, rigid. They can be likened to computer subroutines, blindly executed when called upon by the main program. They occur without intention, with high efficiency and are resistant to modification. They are thought to occur without capacity limitations (e.g., to occur in parallel along multiple modes without mutual interference). A number of comments are in order concerning the distinction between automatic and controlled processes:

(1) The distinction is between response units (of cognition-emotion-conation). It is important not to equate controlled processes with cognition only (as e.g., in the Theory of Reasoned Action (Ajzen and Fishbein (1980)), and automatic processes with emotion or with action habits only. There can also be cognitive automatisms, e.g., schemata or scripts (Abelson (1976)) or consciously controlled emotions, as for instance in the voluntary control of autonomic functions through biofeedback.

(2) The automatic-controlled distinction is not absolute. Kahneman and Treisman (1984) talk of strong, semi-strong and of weak automatisms. Both processes are complementary: controlled processes call up automatic ones to efficiently carry out behavioral sequences; automatic processes may forcefully mobilize controlled ones, e.g., the involuntary mobilization of attention. An example of this can be given in the case of supermarkt shopping. The shopper plans his shopping sequence in a controlled way, partial shopping tasks (e.g., steering the cart) being delegated to automatisms. Unattentive shopping can be brought under controlled processing when an unusual deal is identified.

Table 1
Characterization of controlled and of automatic processes.

Controlled process	Automatic process
Genuine decisions, original	Habitual, routine
Volitional	Spontaneous
Aware, conscious	Unaware, unconscious
Attentive	Unattentive
Flexible	Rigid
Conditional	Unconditional
Capacity constrained	Capacity unconstrained
Divisible	Indivisible, unitary
Much effort	Effortless
High involvement	Low involvement

(3) Since controlled processing requires mental capacity which is in limited availability, it is efficient for the actor to delegate the execution of a multitude of behaviors to automatic control. In view of the multiplicity of consumption tasks facing the consumer, it is to be expected that in consumption, as in other walks of life, automatic processes will be the rule and controlled ones the exception. Much, if not most, of our consumption-related acts occur outside of conscious deliberation. While many of these behaviors have been under conscious control at some point, they have become overlearned to the point of being strong or semi-strong automatisms.

(4) While the emission of habitual behavior belongs to the class of automatic behaviors, the latter also encompasses automatisms in the acquisition and processing of information. Automatisms prevail at the input side as well as at the output side of behavior.

- Unattentive processing of perceptual information can lead to automatic analysis of stimuli of considerable complexity without awareness, eventually eliciting seemingly unrelated overt responses. According to some views, in unattentive processing all possible meanings of a perceptual input are jointly activated in long term memory (Di-

xon (1981)). Conscious representation is constructed out of one of the primed meanings in consciousness. This is achieved through the inhibition of the other meanings which were also activated. An unattentively processed ad for a food product, showing a lovely face, may unconsciously prime the meaning for make-up, facilitating a subsequent cosmetics purchase.

Automatic vs. controlled processing at the input side of behavior is related to the 'levels-of-processing' framework which has been applied to consumer behavior (Olson (1979)). The framework contrasts rather superficial, shallow processing with deep processing of incoming information. Shallow processing results from the analysis of only superficial, directly available properties of the stimulus, as for instance its physical properties and relies predominantly on inborn or on overlearned analytical skills. Deep processing considers the semantic, meaning aspects of the percept and will obtain especially if it relates the perceived stimulus to the personal experiences of the subject. The latter is reminiscent of Krugman's connection concept (Krugman (1965)). Deep processing embeds the stimulus in richer associative networks in memory; the deeper and more elaborate the processing, the stronger apparently the memory trace. While deep processing is clearly the appropriate mode for correctly identifying and analyzing incoming stimuli, it may overload the information processing capacity if each object is to be thoroughly analyzed (Jacoby (1976)). Semi-strong automatisms under the form of schemata or chunks are then available as shortcuts for identification or analysis, as means for easily finding or completing the meaning of stimuli (Bettman (1979)).

The automatic vs. controlled distinction also holds for the processing of information related more directly to the activation of a course of action. A novel situation is likely to engage the individual in conscious cognitive processing in order to decide on the appropriate course of action. Upon each repetition, less information is processed until the actions are guided by contextual cues (shallow processing) with only minimal information processed. New goal-relevant information may then even be ignored (Langer et al. (1978)). With repetition, the situational cues may ultimately be reduced to the superficial properties of the situation rather than to its essential meaning. The consumer's supermarket shopping routine is an example of a script which, after some trials, can proceed with only minimal meaning analysis.

While limited processing is typical for repetitive situations, it may also occur with novel information that appears irrelevant to the subject. In such situations of latent or individual learning, there is no reason for the subject to critically examine the stimulus, as the scarce conscious cognitive capacities can better be used elsewhere. In abstaining from a critical examination, the subject may prematurely commit himself to the script or schema inherent in the information. The person is prepared with one response and does not consider alternatives (Langer and Chanowitz (1981)). Advertisements attended to without concurrent product interest may thus shape knowledge or behavior for future purchase by default.

We conclude that there are two basic types of functioning for the consumer, namely the controlled and the automatic processing mode. Both modes are relevant for the various stages in consumer 'decision making'. Expediency and pleasure dictate that the consumer most often functions in the automatic processing mode and only occasionally in the deliberative optimizing mode. The relevance of both modes also appears from the discussion of the cognitive approach to consumer behavior in the next paragraph.

4. The cognitive approach to the consumer

If the cogntive approach to the consumer can be defined as the application to consumer behavior of the theories and methods of cognitive psychology, then this approach appears as differentiated as cognitive psychology itself. It studies phenomena such as the search and acquisition of information, its analysis and encoding, its storage, structure and transformation in memory, its retrieval or reprocessing from memory and its use for control of behavior (Bettman (1979)). As table 2 shows, the theories applied are as variegated as the aspects of consumer behavior investigated.

From table 2 the following comments are warranted. First, the 'cognitive approach' to the consumer is not a monolithic theory, susceptible to falsification as a whole. New approaches, e.g., those emphasizing emotional processes in the consumer can at best replace or complement some of its components. Second, the cognitive consumer approach is not exclusively that of the consciously functioning consumer; it encompasses many other facets than only the formation of preferences and choices in the multi-attribute cognitive algebra framework. Yet, it is the latter Conscious Cognitive Processing (CCP) approach which has dominated cognitively oriented consumer studies and can be typified as follows:

'(...) we make the assumption that most actions of social relevance are under volitional control (...) we argue that people consider the implications of their actions before they decide to engage or not to engage in a given behavior (...)' (Ajzen and Fishbein (1980))

'(...) [the cognitive processing view] depicts the individual as one who is cognitively aware most of the time, and who consciously, constantly and systematically applies "rules" to incoming information about the environment in order to formulate interpretations and courses of action.' (Langer (1978))

In the consumer behavior literature the CCP view of the consumer often implies some of the following assumptions:

(1) The hierarchy of attitudinal effects is characterized by a cognition-affect-conation progression which can be seen as a causal sequence.
(2) Except for those variables which affect purchase outcomes rather than behavior, the effect of all determinants is mediated by the cognitive component of the response unit.
(3) Affect and behavioral intention are the result of conscious higher-order processing of beliefs.
(4) The choice object/alternatives are known to the consumer as a vector of beliefs or of expectancies provided by the external environment or residing in long term memory; this knowledge is of semantic-analytical nature.
(5) The consumer is conscious of a decision situation between competing behaviors or choice tendencies.

Table 2
Topics and theories in cognitive consumer studies.

Topics	Theories
Search for external information	Perceived risk
	Optimal arousal
	Adaptation level
Interpretation of external information	Attribution
	Self-perception
Analysis/coding of information	Dual coding
	Levels of processing
Formation of inferences	Attribution
	Self perception
	Associative networks
Structure of knowledge in memory	Associative networks
	Prototypes
	Semantic memory
	Episodic memory
	Chunking
Concept formation/categorization	Anticipatory schemata
	Associative networks
	Template matching
Preference formation/choice	Information integration
	Reasoned action
	Expectancy-value
	Attitudinal hierarchies
	Social judgment
Retrieval of information	Associative networks
	Attentive processing
	Early vs. late filtering

Our deliberately extreme depiction of the assumptions underlying the CCP model of consumer choice leads to the consideration of three questions: (1) is this model valid for most consumer choice processes; (2) if not, is it a valid representation for at least some consumer choice processes, and (3) do we need it to account for consumer choices anyway?

5. The validity of the CCP model for consumer choice behavior

Even if deliberate, mindful behavior and the assorted cognitive algebra occur in some instances, one may doubt that it will be a valid representation of most consumer choice processes. Deliberate, mindful behavior is effortful and capacity-constrained and will thus be the exception. Behavioral automatisms, motor habits, direct affect referral and cognitive habits (scripts, schemata) rule over much consumer behavior as they free our conscious cognitive functions for more important tasks and organize his behavior efficiently under normal circumstances. As a result, not all consumer behavior will belong to the 'mindless' variety. Consumers will engage in deliberative thought, in reasoned action primarily when they have no script or schema or when these appear inadequate or cannot be enacted. More specifically, mindful processes are expected (Langer (1978)):

(1) When facing a new, involving situation for which, by definition, there is no available script or schema, e.g., when confronted with a discontinuously innovative product.
(2) When enacting the scripted behavior becomes effortful, e.g., when significantly more of the scripted behavior is demanded by the situation. For the shopper who routinely checks the deals available in local stores in the newspaper, the script may become effortful if several more outlets start advertising in the local paper.
(3) When enacting scripted behavior is interrupted by external factors that do not allow for its completion, e.g., when the habitual brand is not available or in case of a new layout of the habitual supermarket.
(4) When experiencing a negative or positive consequence sufficiently discrepant with the consequences of prior enactments, e.g., in case of dissatisfaction with the habitual brand.
(5) When the enactment of scripted behavior becomes aversive, e.g., when getting bored with the shopping routine in the habitual supermarket.

The above conditions are usually not met and behavior of some automaticity prevails. We now discuss some departures from the conditions.

As mentioned at length in the literature on attitudinal change hierarchies (Ray (1973)), the causal chain does not always follow the progression from cognition to affect and then to behavioral intention. Also, the consumer often does not experience a conscious conflict between competing behavior tendencies likely to mobilize deliberative thought, especially with merely differentiated brands within a product class. Not all models of cognitive algebra are equally demanding of attentive processing capacity (Wright (1974)). The mental arithmetic of a linear compensatory rule appears more demanding than that of sequential and/or of satisficing rules. Some such rules reduce the processing tasks to the point of allowing them to be carried out under virtually automatic control. Certainly, the consumer is not likely to measure up to the data quality requirements implicit in the linear compensatory model (Bultez and Derbaix (1982)).

The acquisition of information from the environment is often not an attentive quest

for knowledge but the outcome of incidental learning, of unattentive processes of attribution, self-attribution or proprioception. As a result, the knowledge can be less semantic and more directly associated with emotional or with motor responses. In particular, much stored consumer knowledge will be of the episodic variety. Certainly, the content and structure of consumer knowledge in long term memory is unlikely to allow a complete analogy with information display boards. This 'knowledge' may contain episodic as well as emotional or motor nodes. The structure may depart from the Cartesian grid representation (two-dimensional matrix of brands by attributes); hierarchial structures are possible as e.g., when conceptual chunks (Bettman (1979)) replace more detailed knowledge.

These criticisms do not lead to a rejection of the CCP model. Rather, it will be applicable only at some times or in some respects. But even where the consumer deliberately attempts to operate in the CCP mode, he may be hindered in his pursuit of rationality by the intrusion of largely automatic and unconscious processes. The literature argues that these automatic processes serve us well in ordinary behavior, but that they occasionally lead us astray when we are engaged in tasks requiring a novel perspective, a restructuration of the field (Katona (1975), Nisbett and Wilson (1977), Nisbett and Ross (1980)). The consumer who sets out to act rationally may thus end up making suboptimal decisions without becoming aware of this. Nisbett and Ross (1980) provide ample evidence of the shortcomings of the human mind when it comes to (1) observing, categorizing and describing events; (2) drawing samples of observations; (3) making inferences; (4) detecting covariation and assessing causality; (5) making predictions; (6) testing and revising conceptions, and (7) making decisions. In fact, if this where not so, the human mind would practice science and statistics intuitively. Nisbett and Ross's arguments give us reason to doubt the easy attainability of the CCP mode as a norm for the consumer. The knowledge he acquires and encodes will be heavily influenced by preconceptions (any Volkswagen is somehow small), be based on limited samples (judging Spain from a single vacation experience), and be influenced by the vividness of the information (stronger impact, of a neighbor's comments than of Consumer Report statistics). The inferences will also be influenced by the representativeness and availability heuristics, by the tendency to attribute dispositionally as well as by the inability to observe the real degree of covariation (BMW buyers are of a particular life style category). Such inferences are judgments that will prove remarkably resistant to further information, to alternative modes of reasoning and to logical or evidential challenges (Consumer Report statistics can hardly correct the attitude developed on the basis of a single negative experience with a brand). Finally, problems occur in decision making. Human judges are known to make less accurate predictions than do formulas; non-diagnostic information dilutes the effect of more diagnostic data, recency effect influences evaluation, etc. The literature on information load (Jacoby (1976)) shows that excessive amounts of information impede optimal choice without the decision maker becoming aware.

6. On the predictive validity of the CCP model

We have argued that the CCP mode may not be applicable to, or attainable by, the consumer. In contrast with this assertion is the observation that the model has proven useful and predictive in many consumer studies over a protracted time period. How can the model be predictive when its validity is in doubt?

The CCP model of reasoned action is structurally virtually indistinguishable from

the micro-economic model of consumer choice, especially in its Abstract Mode formulation (Ratchford (1975)). Both see utility as an idiosyncratically weighted function of multiple characteristics. But the micro-economic model dispenses with the necessity to assume thoughtful, rational deliberation. It requires rationality only in the sense of consistency of preferences. The predictive or explanatory power of demand functions does not require the assumption of conscious deliberation, of attentive optimization. The micro-economic model allows one to post a variety of functions for the formation of utility (attitude). These models are not intended as representations of mental processes and indeed only their ordinal properties matter; many functions which differ in their interval properties will be observationally equivalent for the economist as they result in the same ranking of the alternatives.

This leads us to conclude that the Theory of Reasoned Action makes some assumptions which are not necessary (reasoned choice, the occurrence of cognitive algebra), or proposes a framework which is needlessly restrictive (different models of cognitive algebra). Reasoned action and the assorted cognitive algebra may occur in reality, but this fact may be irrelevant if the purpose is to predict behavior. The result is a rather paradoxical situation between consumption economics and consumer psychology. The latter field often sets out by noting that the rationality required by the microeconomic model is irrealistic and that some psycho-logical realism should be brought in. All things considered, the CCP 'realism' which psychologists brought to economics derives from a rationalist view of man.

If the CCP view is superfluous or mistaken, then how can consumer psychologists uphold it for so long? First of all, the CCP view may be an adequate, but less parsimonious explanation of behavior; while it cannot be proven wrong, it will have contending hypotheses that obtain the same results with fewer assumptions. Second, the cognitive approach has resulted in the development of an extensive methodology; inadvertent application of these methods to automatic processes may yield interpretations cast in the model of thoughtful behavior. Third, the cogntive approach has restaured introspection as an acceptable method to access thought. The introspective methodology is particularly susceptible to the bias of rationalization, and the bias is likely to be in favor of the script of thoughtful behavior. It occurs often that different models are proposed which are observationally equivalent. Only under extreme conditions will some of the models be falsified. There are many possible reasons why choice under automatic control can be confused with that under conscious control:

- The external environment (markets, suppliers) may confront us only with those choice alternatives which we would choose deliberately. This hypothesis of selectivity, reflected and enforced by the social environment is known from the studies on selective exposure (Katz (1968)). A well functioning market can be trusted to present the alternatives preferred by specific publics to those same publics. The result would be that the consumers are provided with optimal 'choice' without any need to think.
- Routine response tendencies may develop from original thoughtful behavior and remain adequate as long as the situation remains unchanged: Affect Referral may become the automatic process after a number of repetitions, yet produce the same behavior as would reasoned action.
- Preferences may result from mindless trial-and-error learning, leading to the development of habits indistinguishable from the behavior dictated by conscious 'optimization' (Rothschild and Gaidis (1981)).
- Preferences and habits can be forced directly as the result of socialization

processes; such preferences will be consistent with 'thoughtful' preferences if the collective, socializing mind is consistent with them.

In the last two paragraphs we attempted to provide an answer to three questions relative to the validity of the CCP model in a consumer behavior framework. A recapitulation of the answers is in order. First, the CCP model's predictive validity may be due as much to its intrinsic validity as to the fact that it produces the same results as contending plausible hypotheses. Second, the area of applications where the model has intrinsic validity, is likely to be fairly restricted. Finally, this intrinsic validity, where it can occur, is always in the nature of an ideal to strive for, that will never be fully attained.

7. The primacy of emotion and consumer behavior

The previous paragraphs put an emphasis on unconscious cognitive processes and their effects. In many overt or covert reactions of an emotional nature, cognition figures as an important prerequisite. In his seminal paper Zajonc (1980), however, posits that in some situations the dominant processes or those appearing first are affective. This primary or dominant affective response, 'love at first sight', is supported by a number of well known findings. First, in ontogeny (the development of the person), affective responses tend to occur prior to cognitive ones; very young babies laugh to a face before being able to discriminate between faces (Izard (1978)). Second, emotions are expressed without a conscious or unconscious construction of meaning for the stimuli that elicit them. [3] Extreme cold applied to the body provokes an immediate affective expression, as may an unidentified loud voice of a particular kind of music in an unattended commercial. Subliminally presented advertisements could potentially evoke an affective response even though there is no empirical documentation for stronger effects, such as inducing behaviors or changing motivation (Moore (1982)). *A posteriori* questioning about the reason for the reaction – in a more of less reactive way – may be often yield justifications rather than substantial explanations. Third, the original cognitive bases of certain emotions or preferences can become forgotten or dissociated from their affective expression (functional autonomy). Thus affect referral (Wright (1973)) is often proposed as an explanation for the basis of consumer choice. The Litman and Manning (1954) study on cigarette preference and recognition shows that smokers can identify their favorite brand in terms of preference (affect) but not in terms of recognition. Zajonc's mere exposure research shows a link of repetition to affect in the absence of stimulus recognition.

The dominance or precedence of affect discussed here does not contradict the tri-component approach to attitudes presented above. When emotions are manifestly the dominant or leading response, this does not rule out the presence of conscious or of unconscious cognitive and conative reactions. Consumers have limited capacities to explicitate the reasons for their (affective) responses however, and presently available measurement tools tap mainly the conscious facets of the tri-component unit. The limited informational value of introspective reports is due a.o. to the fact that the processes to which we might have direct access are very complex and are constantly variable (Natsoulas (1981: 150)). In this sense, we agree with Vandenbergh and Eelen (1983) when they rephrase Zajonc's 'preferences need no inferences' into 'consci-

[3] The experience of emotion, contrary to the expression of it, cannot occur without some form of cognition.

ous preferences need no conscious inferences' in order to resolve the conflict between Zajonc and Mandler (1982).

Further evidence is available for a different basis of affect and cognition. The latent structure behind stimuli seems to differ depending on whether it is inferred from affective (preference) judgments or from cognitive ones (perceived similarity judgments). Zajonc mentions the studies by Nakashima (1909) and by Cooper (1973) in this context. Nakashima found that judgments of pleasantness of sensory stimuli were unrelated to their (conscious) sensory qualities. The affective evaluation appeared as a spontaneous and independent dimension. Cooper attempted to recover the same perceptual configurations (except for attribute weights) for soft drinks based on preference and on similarity judgments, but failed. Preference judgments tended to reveal more subjective dimensions, unrelated to the product's objective characteristics. In the same area, Derbaix, Sjoeberg and Jansson (Sjoeberg et al. (1984)) conducted a further study. They had male and female respondents evaluate famous movie actors of both sexes for preference and similarity. The latent structures recovered from preference judgments revealed different and simpler structures than those obtained with perceptual data. The discrimination between the stimuli (actors) was more pronounced on affective evaluation scales than on (unidimensional) cognitive jugdment scales. The preference judgments also appeared more stable and were performed with more confidence by the subjects. An additional finding was that female respondents, as evidenced by concurrently administered mood scales (Green and Nowlis (1957)), reacted more negatively to the perceptual similarity tasks than males. Could this be evidence in favor of the sterotype which makes emotion a female and cognition a male mode of response?

8. The properties of affective responses

Although we have recently recorded a flow of theories of emotion, [4] the knowledge presently available regarding the nature of the affective response is meagre. If the consumer sometimes reacts primarily by way of emotion, it matters to know these properties in order to conduct research. With logical arguments, but sometimes with limited empirical support Zajonc (1980: 151, 156, 157, 168, 169) stressed that the affective response can be said to be pre-cognitive, primary, basic, instantaneous, dominant, automatic, partly independent of cognition, inescapable, effortless, irrevocable, holistic, more difficult to verbalize, yet easy to communicate and understand.

Some of these properties have particular relevance for consumer behavior research:

Pre-cognitive and primary; instantaneous. If the leading reaction in the behavioral chain is affective, this opens the possibility for attitudinal change hierarchies where affective change precedes and colors subsequent conative/cognitive changes. Such an 'affective' hierarchy is proposed for children by Derbaix (1982) and cannot be ruled out for adults.

Irrevocable; inescapable. 'Deep in one's heart' one knows what is right. Emotions cannot somehow be 'wrong'. As a result, consumer affect will be hard to change if it is primary; rather, it may lead to a search for supportive cognitive elements in order to rationalize or justify itself. Consumers will easily state their preference for a product and refuse to admit that the cognitive bases for it are mistaken or not applicable anymore. The same

[4] These can be categorized under: Cognitive theories of emotion, where cognitive processes constitute necessary elements and lead to the explication of emotional experience (Mandler (1975), Lazarus (1966), Schachter and Singer (1962)) and somatic theories of emotion, essentially focussed on the expression of emotion (Izard (1978), Leventhal (1980), Tomkins (1981)).

will hold even more strongly for political or ideological preferences. The expression of emotion can sometimes be controlled, but not the experience of it. This opens the possibility for a discrepancy between what is experienced and what is expressed.

Difficult to verbalize. Descriptions and explanation of affect often yield only vague and tautological verbalizations. Methods to tap the intensity, direction and content of affect which are less verbal in nature seem to be required in order to conduct methodologically unbiased studies.

Easy to communicate and understand. Understanding and communication of feelings are easy at the spontaneous, intuitive and non-verbal level. Emotions however defy verbal expression to some extent; problems are encountered if one attempts to register them by means of classical 'paper and pencil' methods. On the other hand, categories and instruments to record objectively affective experience are still relatively undeveloped, despite the efforts of some researchers, e.g., Kroeber-Riel (1982), Russo (1978).

Holistic and global. This refers to the relatively integrated, undifferentiated nature of emotions, at least at the present state of our knowledge. As discussed above, for instance, preference data, in comparison with perceptual similarity data, uncover relatively simple, low-dimensional stimuli-spaces (Derbaix (1978), Giorgi and Derbaix (1981)).

A few more characteristics of emotions could be added. The experience of emotions seems to be accompanied by somatic changes, hence the tendency to use biopsychological methods to record them. Further, emotions perhaps involve different processes and are stored separately from cognitions. Kahneman and Treisman (1984) put forward a challenging hypothesis about the integration and interaction of psychological functions in the individual. Their idea is that the organism and especially the brain should be compared to an organization, where some things are known to, or experienced by, some components without the other components sharing directly in this knowledge or experience. The hemispheral lateralization view (Hansen (1981)) espouses this logic to some extent, by placing the locus of semantic-analytic processes in the left brain and of the more analog and direct experience processes in the right brain. Krugman (1977) relates this left/right brain distinction to the concepts of recall and of recognition and to those of high/low involvement in communication effects. Recall would be the province of semantic memory, recognition more of episodic memory. Recall of imagery, of picture memory is difficult; 'there is no recall because we have had only right-brain involvement'.

As a last property, one may mention that affect can be short-lived, episodic. Emotions 'wax and wane in the course of particular experiences, rather than being necessarily present on demand at the moment of questioning' (Abelson et al. (1982)).

When asked 'are you angry at the President?', it might be reasonable to answer 'not today'. Such an answer would be less reasonable to the question whether one thinks the President is an able politician. If emotions are ephemere, positive and negative affect (mixed feelings) could occur simultaneously.

The characterization given of emotions implies that the measurement of affect which is not based on inferences confronts one with novel problems. Fishbein, Ajzen, Rosenberg and their many marketing disciples conceptualized preferences as a weighted sum of cognitions. The allied measurement methodology allows one to bypass the direct measurement of affect itself. The cognitive elements, in this conception, are not only the mediators between the stimulus and the affective response, they are the atoms of the preference molecule itself. In the non-cognitive approach to affect, specific tools need to be devised in order to apprehend the occurrence, the intensity and content of the affective response. An

excellent survey of apropriate observation instruments is given by Kroeber-Riel (1983).

9. Modifying attitudes involving little or no cognitive support

Modifying affect which is not cognitively based may require rather different methods from those used to change an attitude founded on cognition. It is possible that attitudes having a firm emotional basis without cognitive elaboration can be changed only by methods that have a direct emotional influence, thus bypassing unimportant cognitive elements. In a clinical context, the relative independence of the cognitive and affective systems may help to account for the 'irrationality' of fear and for other forms of abnormal experiences and hence for the notable resistance to cognitively induced changes that give rise to the need for therapies and therapists (Rachman (1981)).

In the advertising context, more appropriate models of presenting material to the visual system have to be devised. Visual materials, the use of imagery and of musical stimulation may lead directly and efficiently to affect modification (Gorn (1982)). Paivio (1978) has argued that affective judgments are more closely associated with the imagery system than with the verbal system. He has also proposed that visual and verbal material are organized and processed separately. In this respect we are convinced that our visual representation of products, stores, services, etc., is much more suited to generate hypotheses about them than the semantic definitions we have for those same objects. It is relevant that Paivio found that reaction times for pleasant–unpleasant ratings were longer for words than for pictures. He commented on this result as follows: 'The analog information involved in pleasantness and value judgments is more closely associated with the image system than with the verbal system' (Paivio (1978: 207)).

It is our conviction that marketing practice has much to learn from the scientific results obtained in this area. This knowledge will be gained through experimental rather than through survey research. It is much easier to find ways to manipulate the 'factual' content of an ad than to manipulate its 'affective' content. A communication can be 'objectively' content-analyzed in terms of the information it will deliver (e.g., using the method proposed by Resnik and Stern (1977)). This is harder from the point of view of the affect it will induce, if only because of the very subjective nature of the affective response. The importance of experimental approaches is clear here.

We have not yet mentioned the conative component of the response unit as a pathway to the manipulation of affect. In the associative network view, the induction of acts will also activate meaning and emotion, as the Wells and Petty (1981) headphone experiment demonstrates. This reverses the usual order of causality between changes in cognition, affect and behavior. As Zajonc and Markus (1982) point out, 'affect can be acquired through habituation, familiarization and positive reinforcement'.

The preceding suggests at least three things from the perspective of behavior modification:

(1) It is not always necessary to use factual or rational communication. The propaganda of the thirties based its success on methods designed to appeal directly to emotion, with an impressive behavioral effect.
(2) The way to changing behavior may be shorter or less arduous if affect and cognition are dissociated.
(3) New tools and means are needed in order to measure and to modify attitudes.

These points assume that it is necessary to modify affect in order to influence behavior.

In addition, situations can be envisioned where cognitions directly induce behavioral change; knowing what to do, and doing it, is very well possible without involving affect. Let us not forget, finally, that affective processes or states may cause or enhance cognitive effects, in the sense that the one who 'loves the most' also 'understands the best'.

The three preceding paragraphs discussed the revival of psychological theories focused on direct emotional, or even on direct conative responses. When we reflect on the nature of emotions, we become aware that these are still ill-defined and, as a result, very hard to measure. When reflecting, in addition, on behavior manipulation, we must further admit that little is known still on ways to modify affect that do not operate through the cognitive components.

10. Implications for the field of consumer research

The preceding sections drew heavily on contributions from psychology. What are the more concrete implications for the field of Consumer Research? We see specific repercussions in the areas of theories/models, of research methods and of marketing practice. Rather than summing up detailed opportunities, we shall indicate interesting areas for new contributions in the domains of theories and of methods.

In terms of theory, the area of low involvement consumer behavior is to benefit from the insights expounded above. Low involvement has been an elusive concept to define and measure. The distinction between automatic and controlled processing as well as the conditions for the occurrence of either are contributions from cognitive psychology which will help to clarify the concept of low involvement. But further, low involvement is hardly more than a concept in consumer theory. There are few models that detail low involvement behavior beyond Krugman's low involvement attitudinal hierarchy (Krugman (1965)); this leads to a pressing need for models of the formation, change and structure of low involvement cognition, affect and conation. Alternatives for the multi-dimensional expectancy-value conceptions are available in terms of consumer scripts and schemata, of associative network structures, of analog representations, etc.

The area of Consumer Research contains two dormant streams of research, the one non-cognitive, the other non-conscious in orientation; both are worth reactivating within the present, enriched framework. The non-cognitive area of routine choice behavior, of brand loyalty and stochastic brand choice models should be revised and extended in its scope to other behavioral habits than brand choice or even to cognitive habits; this will help to make the concept of routinized consumer response more meaningful. The non-conscious stream of research in Consumer Psychology has been the province of Motivation Research. This orientation, while pronounced dead by theoreticians, is alive and well in the world of marketing practitioners. Motivation Research drew its inspiration from the psychology of the subconscious, while its intent mostly was to explain unconscious effects, which we would now associate with automatic processing and with mindless behavior. The results of present-day cognitive psychology allow us to draw more, better founded and more refined conclusions in this area. This is the case a.o. in the field of subliminal stimulation (Moore (1982)) where we are now able to state which effects can be expected under what circumstances.

Beyond low involvement effects, psychology offers interesting contributions in the areas of the primacy of emotions and of behavior manipulation. Both have received relatively less attention in consumer psychology, so that an influx of theories, models and methods is to be expected and welcomed.

In terms of methods, new developments should take into account that consumers are often unaware of some states or processes and barely aware of others. Moreover, their cognitions may be of a nonverbal nature and/or do not conform to the structure or content required by CCP models. This recommendation is not new. Every market research handbook warns of the drawbacks of structured undisguised questionnaire studies, suggests alternative methods but usually fails to make these very operational or to provide a framework for their application. Verbal self-reports assume a respondent who is able and willing to provide valid answers. Nisbett and Wilson (1977) alert us to instances where the ability to report introspectively is attenuated, namely:

- when the event and the report are removed in time,
- when the behavior is caused by contextual effects,
- when the behavior is due to the mechanics of judgment,
- when the behavior is due to the nonoccurrence, rather than the occurrence of events,
- when the determinants of behavior are rather nonverbal, and
- when there is a discrepancy between the nature or magnitude of determinants and of events.

In addition, the type of verbal questions asked can be misleading in suggesting the desirable content or structure of the replies.

In view of these difficulties, one avenue is to avoid the verbal self-report. The conscious cognitive contents could be elicited directly in an appropriate nonverbal mode. Direct magnitude scaling (Behrens (1983)) in nonverbal modes can rely on well-established findings in psychophysiology. Even if reports cannot be given directly in the corresponding sensory mode, human synaesthetic capacities may allow better expression in other than verbal modes. The Program Analyzer methodology, as a specific example, adds the advantage of continuous, almost concurrent and therefore more spontaneous response registration.

Other principles of measurement avoiding the verbal self-report rely on the registration of manifest or of nonmanifest behavior. Manifest behavior often is the ultimate decision criterion. Experimental research using manifest behavior as the dependent variable offers the advantage of strong internal validity and of higher external validity than studies taking intermediate variables as their dependent variable. Unfortunately, experiments tend to be obtrusive, and the question of reactivity looms large in marketing studies, where it is often hard to develop a suitable disguise. In addition to manifest behavior, there are innumerable kinds of less manifest bodily processes which are concomitants of psychological states or processes. On the somewhat manifest side, nonverbal behaviors (bodily posture, facial expression) are available as dependent variables or as indicators of intervening variables (Kroeber-Riel (1983), Weinberg (1983)). Less manifest are physiological changes (EDR, hart-rhythm, blood pressure, eye movements), which presently allow vastly better measurement, encoding and analysis due to the progress in digital equipment. The progress in measurement ability is not, at present, matched by an equal proficiency in the validation of such measures. In particular, the danger is real that such measurements are too easily equated with direct observations of specific abstractions (e.g., 'EDR measures emotion') and uncritically applied in a consumer research context. This observation methodology can yield its full potential only in well planned research which specifies its hypotheses a priori and selects the operationalizations in function of the hypotheses.

The former research methods allow the study of unconscious processes and states as well as of the barely or fully conscious ones. In the latter cases, we recommend to apply

them in addition to verbal self-reports, as suggested by the Multimethod-Multitrait approach.

The barely conscious contents could, in principle, also be revealed by verbal self-reports. Care should than be taken to avoid contamination of the verbalizations by conscious and rather verbal intervening processes. The principles for the elicitation of the barely conscious will mainly involve (1) methods to heighthen the consciousness of what was till then barely conscious; (2) the concurrent or almost concurrent elicitation of verbal reports with the processes under investigation, and (3) the facilitation of the expression by means of projective materials (Kroeber-Riel (1983)).

Conscious cognitive content suited for verbal expression, finally, lends itself to elicitation through self-report measures. The danger of contamination through the reporting process can be minimized by applying unstructured spontaneous elicitation formats. The analysis of the content and of its structure, however, puts more of a burden on the investigator. He should take appropriate measures in order not to contaminate the data by his interpretation (Leigh and Rethans (1983), Dillon (1982)).

11. Conclusions

Our introductory comment stated that the present 'non-cognitive' revolution in consumer research is reminiscent of previous episodes in the field, where behavioristic and emotional or motivational concerns were in their heyday. We also argued that we are not witnessing a simple return to the old approaches, but that the cognitivistic research line had deepened our understanding and prepared us for a better study of the 'non-cognitive' processes. Two major insights seem to be especially relevant. First, the distinction between cognition, emotion and conation is an artificial one, even though it is often useful. The recent cognitive research tradition has made us attentive to the fact that these constructs cannot be sharply distinguished from one another and that they interrelate in often subtle ways. It has also emphasized the distinction between conscious and pre-conscious processes. In particular, the automatic tendency to equate cognition with conscious phenomena and emotion with unconscious ones is shown to be counterproductive.

As a result, consumer research findings made a long time ago are again opened for investigation. In 1961, D.F. Cox, in this classical text on communication principles in advertising stated that the connection between a person's knowledge and his attitudes and between the latter and his behavior were not necessarily direct, one-to-one. In the same year, Bauer and Bauer wrote that one of the major ways in which mass media influence public attitudes is via the second order effect of having first elicited behavior based on other existing attitudes. These and other similar effects are now again fashionable study objects. While a substantial body of theoretical insight has diffused from psychology to consumer behavior research, this theory will now have to be translated and adapted to the consumption field. More in particular, the methodology of this research will need to be adopted, adapted and developed.

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