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SWP 40/87 CONSUMER THEORY : SOME CONTRIBUTIONS OF A BEHAVIOURAL ANALYSIS OF CHOICE

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ABSTRACT

The dominant paradigm for consumer research in the context of marketing is 'cognitive information processing'. The fundamental assumption of this frame of reference is that observable behaviour is necessarily preceded by intrapersonal mental events which also so serve to explain that behaviour. So strongly entrenched is this paradigm that models of consumer choice derived within it readily accommodate critical viewpoints, absorb and assimilate even antithetical models of man such as that presented by radical behaviourism. Behaviourism has been misinterpreted and misrepresented by consumer researchers who have adopted a cognitively-based mode of explanation to the exclusion of all others. This paper raises the question of how scientific progress is possible in consumer psychology, given the preeminence of this explanatory mode. It argues that cognitive information processing explanations should be subjected deliberately and systematically to a rigorous critique based upon the contrasting assumptions about the causes of behaviour which are found in alternative perspectives. Particular attention is drawn to the potential contribution which radical behaviourism might make in this respect and its role is illustrated through discussion of the explanation of consumer innovativeness.

INTRODUCTION

Marketing practitioners and applied researchers often try to avoid academic speculation, prefering to 'let the facts speak for themselves'. Their apparent quest is for the unadorned description of marketing phenomena through direct observation of the facts and the first-hand experience of managerial realities. Some marketing academics, like certain of their counterparts in other disciplines, seek scientific explanation, if at all, only in the form of empirical generalisations built up from multiple observations (Hempel 1958; see also Dubin 1983; Vyas and Woodside 1984, for recent examples). Theory and metatheory are still widely considered to be irrelevant to or even obstructive of useful empirical research and the effective practice of marketing.

However, observation/practice on the one hand and theory/metatheory on the other are inextricably linked. One of the most far-reaching conclusions to emerge from the philosophy of science is the inevitably theory-laden nature of even the simplest observation (Kuhn 1970a; Popper 1972, 1980). Observation cannot be other than selective, reflecting a point of view; and descriptive statements are inescapably interpretations, 'interpretations in the light of theories' (Popper 1980:107n; 1972:46;emphasis original throughout). The language in which observation is described is itself a model of reality, not the thing described; and the 'facts' are not logically prior to theories but are generated by them. Popular notions notwithstanding, scientific advance does not consist in the production of successively more accurate descriptions of a subject matter independent of the conceptions of scientists (Feyerabend 1970, 1975; Kuhn 1970b; Lakatos 1970).

The theory-dependency of observation has recently been acknowledged in the marketing literature as part of a renaissance of interest in theoretical issues (e.g. Anderson 1983; Peter and Olson 1983). Consumer theory has also received attention (Howard 1983; Kassarjian 1981; Olson 1982). This interest is welcome in view of the atheoretical tendencies of many researchers and the failure of even some of those who have seriously approached the task of theory construction to formulate testable propositions or to expose their explanations to critical evaluation (Bagozzi 1984; Foxall 1980a,b; Jacoby 1978; Tuck 1976). This paper is intended to contribute to the progress of psychological explanation in consumer research by considering: (i) an analysis of choice which accords explanatory power exclusively to the environmental consequences of behaviour, denying causative significance to intrapersonal events; and (ii) the relationship between that analysis and the prevailing paradigm for consumer research which derives principally from the cognitive psychology of human information processing. The focal approach to explanation, radical behaviourism, draws upon the experimental analysis of operant conditioning phenomena and extrapolations from that analysis to human social affairs in general. Both analysis and extrapolation owe much to the work of B.F. Skinner (1938, 1950, 1953, 1957, 1969, 1972, 1974) to which frequent reference will be made[1]. Whilst operant conditioning has been mentioned in the marketing literature (Nord and Peter 1980; Rothschild and Gaidis 1981; Peter and Nord 1982), its discussants have been preoccupied with the search for managerial prescriptions, particularly in the manipulation of promotional stimuli. Behavioural theory has received limited attention (e.g. Howard 1965) but the distinctive explanatory contribution of

radical behaviourism has failed to find a recognised place within consumer research, largely because of the success of the prevailing paradigm in neutralising the antithetical model of man which it presents. In spite of the slowly increasing theoretical sophistication of the discipline, two problems remain: that of ensuring the theoretical progress of a consumer psychology dominated by an all-embracing cognitive paradigm, and that of finding an acceptable place for the alternative explanatory mode proffered by radical behaviourism which is increasingly acknowledged in general applied psychology (Kazdin 1980; Sheldon 1982). This paper argues that there exists a common solution.

It follows from acceptance of the theory-ladenness of observation that even the most casual investigator is influenced by some framework of assumption through which the 'facts' are constructed. The paper uses the term 'paradigm' to denote such a framework. Kuhn (1970b:176) refers to a paradigm as 'what the members of a scientific community share...some implicit body of intertwined theoretical and methodological belief that permits selection, evaluation and criticism'. Although Kuhn's use of the term has its ambiguities (Masterman 1970), it suggests a frame of metatheoretical reference within which theory is derived, by which empirical investigation is governed, and through which theory and observation are related in the process of explanation[2]. The use of the term paradigm to denote this frame of reference does not, however, imply acceptance of Kuhn's wider conceptualisation of the nature of scientific progress. The theories which are derived within paradigms are much more specific statements which are related in some way to observable phenomena and which can thus be judged according to their capacity to render observation more intelligible. However, it

follows also from the theory-laden nature of observation that any given theory has meaning and significance only within the paradigm to in which it is derived (cf. Anderson 1983; Hunt 1983).

COGNITIVE INFORMATION PROCESSING

Approach to Explanation and Theory

The delineation of an extant paradigm is a hazardous task: historians of science have not always agreed upon the scope and content of completed research programmes. Nevertheless, the predominance of cognitively-based explanations in consumer research is undeniable. The explanation of consumer choice in terms of intrapersonal information processing has enjoyed a 'meteoric' ascent, part of the revolution in psychology which, according to Kassarjian (1981), has established the cognitive frame of reference as the dominant paradigm in that discipline. The explanation of human behaviour by analogy with the information processing and quasi-intellectual functions of computers also plays a part within this paradigm (Boden 1977; Newall and Simon 1972; Neisser 1967: Pervin 1984). It is proposed to refer to this perspective as the 'cognitive information processing paradigm' or CIPP. The CIPP has the following features by which it conforms generally to the requirements of a scientific paradigm (see Valentine 1982): a recognisable philosophical foundation in which behaviour is explained as the outcome of intrapersonal factors under varying degrees of autonomous control; a defined subject matter consisting of experience and consciousness as well as behaviour; and a feasible methodology that rests particularly upon the statistical comparison of the means and proportions of groups of sample

subjects.

The fundamental assumption of this prevailing paradigm for consumer research is of a psychodynamic nature: it is the belief that behavioural change cannot be conceived in the absence of prior, corresponding, intrapersonal change. Roberto and Pinson (1973:33-34) identify the general assumption in marketing-baseed consumer psychology that attitudinal change is an inevitable precursor of behavioural change and cite evidence of its widespread acceptance among academic and commercial marketing researchers as a device which makes observed behavioural change intelligible to the onlooker (see, for instance, Fothergill 1968; Robertson 1971; Roper 1966). Prebehavioural change in attitudes - which are located 'inside consumers' heads', according to Schiffman and Kanuk (1983:210) - is also assumed by the major textbooks of consumer behaviour as part of their general accommodation of cognitively-based, information processing explanations of choice. Nor is this an unusual stance; the basic assumption belongs to a more general pattern of social scientific explanation in which the causes of behaviour are deduced from the alleged purposes of the observed action. As Addison, Burton and Torrance (1984:7) put it: 'Causality in human beings operates through the mind of the agent...Human beings, unlike purely physical processes, are telic; that is, they pursue ends and purposes, and can and do conceive of the notion of adopting a means to an end'. Thus the mode of explanation employed within the CIPP is founded upon two types of concept: those which relate to an observable, behavioural realm of activity from which explicanda are derived, and that which refers to an unobservable, usually mental or conceptual, realm of prebehavioural, interpersonal events in terms of which the explicans is couched

(see also Moore 1981:62). This method of explanation is essentially that of the stimulus-organism-response school (Tolman 1932; Woodworth 1938) which employs theoretical terms at a nonobservable level of analysis with the intention of rendering observed phenomena intelligible and to explain relationships among observables (Hyland 1981; for discussion in the context of marketing models ofbuyer behaviour see Howard and Sheth 1969).

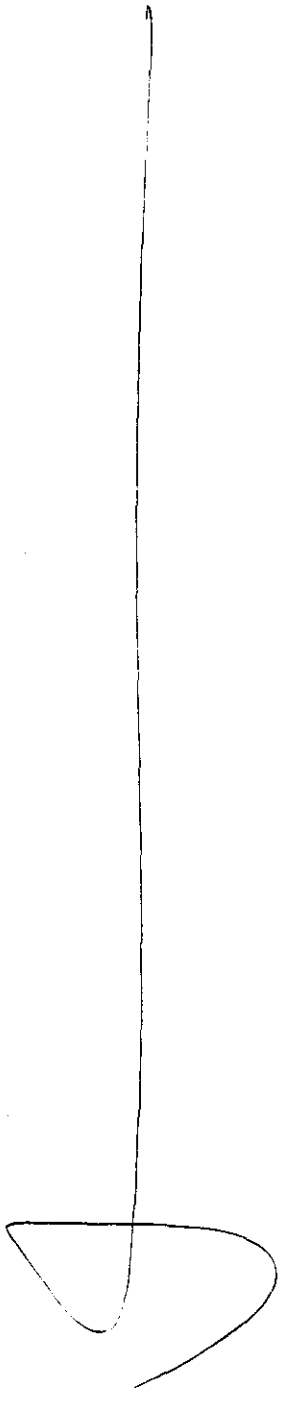
Models of consumer choice are almost without exception based firmly upon this duality. In his summative, 'bare bones' representation of the process involved in consumer decision-making, Howard (1983:96) takes for granted that consumer behaviour is 'largely determined by how the customer thinks and processes information' and the central causal chain of what he calls the Consumer Decision Model is Information - Attitude - Intention - Purchase. The major comprehensive models of consumer behaviour (Engel, Kollat and Blackwell 1968; Howard and Sheth 1969;Nicosia 1966) share the common basis of the rational decision process devised by March and Simon (1958;Jacoby 1983). These models credit consumers with considerable capacities for receiving and handling quantities of information and for undertaking prepurchase searches and evaluations. Their central component is an extended consumer decision sequence in which information is received and classified by the individual and, subsequently, via mental processing, transformed into the attitudes and intentions which determine such purchase behaviours as brand choice (cf. Bettman 1979; McGuire 1976a,b). The computer analogy has also found ready application in this subfield of cognitive explanation: consumers have been represented by means of 'central control units' and similar devices for the processing of information (Engel, Kollat and Blackwell 1973).

Treatment of Persuasion and Choice

Models of consumer response to advertising also propose that the persuasive message initiates within its recipient a series of psychological effects which culminates in the purchase of the advertised brand (e.g. Colley 1961; Lavidge and Steiner 1961). Each of these models assumes 'a rational, discerning and active effort on the part of the receiver. [Their] cognitive-affective-behavioural approaches posit the consumer devoting attention to the ad, critically perceiving the content (perhaps derogating the source, ignoring certain appeals and challenging some arguments), evaluating the personal relevance of the benefits offered, forming and attitude, and executing a purchase' (Atkin 1984:210; see also Driver and Foxall 1984; Ramond 1976).

Within both the comprehensive marketing models and those which have referred principally to advertising, consumer choice has been understood as an ego-involving sequence of cognitive, affective and conative changes. Choice has been depicted as a mental process involving 'hesitation, inspection of alternatives, and uncertainty': it implies a multiplicity of possible outcomes, a state of affairs which stimulates inner conflict which can be reduced only by cognitive activity (Hansen 1976). The decision maker is assumed to use evaluative criteria to predict the outcomes of each available option in terms of his or her objectives; decision rules or methods of comparative evaluation are employed to decide upon a course of action; information is received, processed, stored in and retrieved from memory - all in the course of making a decision before purchasing (Engel and Blackwell 1982; Markin 1974; Olshavsky and Granbois 1976). Whilst it is true that the comprehensive models have included the

possibility of environmental and situational forces impinging upon choice, these influences are portrayed generally as cognitively-mediated rather than exerting direct pressure upon the outcomes of decisions, and explanations of those outcomes have not proceeded in terms of these extrapersonal factors.



THEORETICAL PROGRESS

The Strength of the CIPP

The problem raised by the present paper does not derive from the existence or legitimacy of the mode of explanation involved in the CIPP; rather, it concerns the route to theoretical progress which is appropriate given the stength of that paradigm's philosophical stance in consumer psychology. The strength and resilience of the CIPP are apparent not only from its dominant influence in the development of marketing models of consumer behaviour but also from its capacity to withstand forceful criticism, to accommodate, absorb and render harmless alternative perspectives. During the last decade or so:

(1) the comprehensive models of consumer decision-making have been extensively criticised, notably in view of the untestable nature of their propositions (Bagozzi 1984; Jacoby 1978; Tuck 1976) whilst alternative approaches, located much closer to observable consumer behaviour, have been advanced (e.g. Ehrenberg 1969, 1972, 1974; Ehrenberg and Goodhardt 1980);

(2) empirical research has revealed low correlational consistency between measures of the central prebehavioural components of the models derived within this paradigm and purchase choice behaviour itself (Ajzen and Fishbein 1977; Fishbein 1981; Foxall 1983, 1984a,b; Wicker 1969, 1971);

(3) consumers have been shown to make smaller and less rational use of information than the CIPP assumes, whilst the notion of consumer decision-making has been questioned in view of the lack of empirical correspondence observed (Jacoby, Chestnut and Silberman 1977; Markin 1974; Olshavsky and Granbois 1976); at the same time, the significance of environmental factors in the explanation of consumerCchoice has been debated (Belk 1974, 1975;

Branthwaite 1983; Kakkar and Lutz 1981; Leigh and Martin 1981);
(4) sequences other than cognition-affect-conation have been shown to describe more accurately the consumer choice process - e.g. the low involvement hierarchy (Ray 1973) - and alternative views of the learning of brand preferences in response to televisual advertising have been proposed (Krugman 1965; Robertson 1976; van Raaij 1983);
(5) at a more practical level, the inability of market research to predict such aspects of consumer behaviour as innovative brand choice has called into question the validity of the marketing concept of consumer-oriented management (Foxall 1984c; Oxenfeldt and Moore 1978; Tauber 1975, 1977, 1981).

The seriousness with which these potential threats to the preeminence of the CIPP have been debated suggests that that paradigm is a relatively open system rather than a closed, monolithic philosophical straitjacket. Neverthless, the paradigm appears largely to have absorbed the alternative perspectives presented to it. Its fundamental, cognitively-based assumptions have survived unscathed: they may even have been strengthened in the process. Models have been modified without deviating from the philosophical stance which was summarised above (compare Engel and Blackwell 1982 with Engel, Blackwell and Kollat 1978; Howard 1977 with Howard and Sheth 1969).

But the status of the CIPP is especially apparent from its adherents' reaction to the intellectual challenge provided by radical behaviourism, an alternative psychological paradigm whose philosophical stance (described more fully later) is the opposite of that inherent in the CIPP. Radical behaviourism explains behaviour in terms of extrapersonal events alone and resists the assumption that intrapersonal mental or neural processes cause

overt behaviours. Marketing writers who have shown serious commitment to this paradigm (e.g. Kunkel and Berry 1970) have, for the most part, been ignored. Recent advocates of a behaviour-based perspective such as Nord and Peter (1980) and Rothschild and Gaidis (1981) have avoided commitment to radical behaviourism itself, prefering the social learning theories of Bandura (1977, 1978) and Staats (1975) which admit cognitive mediation of environmental stimuli and the reciprocal determinism of individual and environment. Those consumer behaviour texts which discuss it, tend to distort the character of radical behaviourism by denying its emphatic rejection of mental causation. Some do this apparently without recognition, including such concepts as 'attitudes', 'needs', 'wants' amd 'motives' in their brief accounts of operant conditioning (e.g. Engel and Blackwell 1982: 240-242; Williams 1981:44-45). Others deliberately blend cognitive explanations with discussions of environmental influences (Loudon and Della Bitta 1983:469). Moreover, many exponents of operant conditioning misdefine its central concepts such as negative reinforcement (Engel and Blackwell 1982; Schiifman and Kanuk 1982; Williams 1981). Thus is the distinctive explanatory contribution of an alternative paradigm lost, the possibility that it might play a role in the progress of consumer psychology overlooked.

The existence of a strong paradigm has many advantages for consumer researchers, especially insofar as it brings a measure of unity and consensus to a still young field of enquiry. Yet it is the very success of the CIPP which now inhibits certain forms of theoretical progress which require the critical evaluation of the fundamental assumptions of the paradigm. Once the psychodynamic assumptions of the CIPP have been accepted,

ready-made 'explanations' of any observed behaviour can be effortlessly found in an appropriate 'attitude' or 'personality trait' or other intrapersonal cause which is inferred from the behaviour in view. Skinner (1963:957) has commented on this practice that 'It is too easy to say that someone does something "because he likes to do it", or that he does one thing rather than another "because he has made a choice".' Even if it is argued that complicated networks of theoretical terms and their interactions avoid the behaviourist's contention that unobservables are explanatory fictions (Underwood 1975), the problem of subjecting unobservables to logical or empirical tests of verification or falsification remains intractable. Popper's (1972:34-35) portrayal of psychoanalysis and marxism as systems that offer universal explanations of human affairs but whose tenets are irrefutable by known scientific test, applies also to the mentalistic model of man found in much consumer psychology. Consumer psychology, certainly in common with psychoanalysis and possibly with marxism, employs unobservables which are posited at so high a level of abstraction that they apparently redescribe any facet of behaviour as long as the originator or recipient of the explanation is a convert to the basic assumptions of the system. So successful has psychoanalysis been in this respect that it has become the basis of an 'institutionalised psychologism' which performs valued social functions in some circles (Berger 1965). Consumer psychology, via the CIPP, has similarly provided a universal approach to explantion of human behaviour in the marketplace but little attention has been given to the scientific progress of this body of knowledge and perspective.

Progress in Science

What attention has been given to the theoretical status of CIPP-dominated consumer psychology has been focused principally upon increasing the internal efficiency of the paradigm: efforts have been made, for instance, to encourage researchers to give attention to construct validity and other neglected concerns (Jacoby 1978). Attention has also been given to the establishment of criteria by which comparisons may be made intraparadigmatically of competing theories. Such criteria include parsimony, predictive valididy, clarity, empirical support, fruitfulness, and logical precision (Goodson and Morgan 1976; Paxton 1976). There are often disagreements over whether any of these deserves preeminence and the need to trade one off against another (cf. Midgley 1984; Silver 1984), but there is some evidence of their general usefulness for the comparison of theories derived within a given framework of assumption (Valentine 1982). However, given the existence of a multiplicity of competing paradigms, one of the major problems of ensuring scientific advance is the need to compare whole frameworks of assumption, method, analysis and explanation one with another. This more far-reaching problem of encouraging inter-paradigmatic comparisons has generally been ignored. The problem is not confined to the sub-discipline of consumer behaviour: throughout the behavioural and economic sciences, there is a paucity of agreement on the philosophical basis of such comparisons (Bell and Kristol 1981; Borger and Cioffi 1970; Chapman and Jones 1980; Lakatos and Musgrave 1970; Robinson 1962).

Indeed, the theory-ladenness of observation suggests that there can be no absolute criteria (i.e. criteria existing independently of the subjective perspectives of investigators) by

which competing explanatory systems can be ultimately evaluated. Perhaps this is why the procedure in which scientists abandon one paradigm in favour of another has been likened to a religious conversion (Kuhn 1970b). Kuhn's proposal that paradigms are successively established (see, also, Anderson 1983) has been strongly challenged by Feyerabend (1970) who argues that competing theories proliferate not intermittantly, during the periods of crisis that precede the revolutionary overthrow of one paradigm by another, but all the time as a constant feature of scientific investigation and discovery. Thus, he writes that 'Science as we know it is not a temporal succession of normal periods and periods of proliferation; it is their juxtaposition.' Science has its normal and proliferative modes but their relationship is accurately described as 'one of simultaneity and interaction' (Feyerabend 1970:209). The deliberate proliferation of competing theories produces an 'active interplay of various tenaciously held views' which is necessary to progress. Proliferation and tenacity are the closest Feyerabend comes to the specification of any principles of scientific advance, however. The 'anything goes' approach which he advocates to scientific investigation and explanation - 'epistemological anarchy' - involves a planned plurality of methodologies and theoretical perspectives which encourages the development of novel explanations and the resuscitaion of old ones, engendering scientific progress by forcing into the open the assumptions which underlie specific theories and thereby stimulating constant critical comparison. Contradictory theories should be welcomed, he argues, since the evidence required to test one may not be generated but for another. Stubborn adherence to socalled rules of scientific method is inimical to progress since it can only

restrict intellectual enterprise. 'Knowledge so conceived is not a series of self-consistent theories that converges towards an ideal view; it is not a gradual approach to truth. It is rather an ever increasing ocean of mutually incompatible (and perhaps even incommensurable) alternatives, each single theory, each fairy tale, each myth that is part of the collection forcing the others into greater articulation and all of them contributing, via this process of competition, to the development of our consciousness. Nothing is ever settled, no view can ever be ommitted from a comprehensive account...There is no idea, however ancient and absurd that is not capable of improving our knowledge' (Feyerabend 1975: 30,47).

The CIPP undoubtedly provides the normal component of current consumer psychology: its weakness is that whilst it is not without intellectual challenge, it avoids serious confrontation, whereas it follows from Feyerabend's position that scientific progress depends upon paradigms' responding appropriately to challenges rather than absorbing them. Consideration of the tenets and principles of an alternative paradigm, especially one as antithetical in its explanatory mode as radical behaviourism, should be progressive for consumer psychology, therefore, if only because it encourages the articulation of the underlying assumptions of the prevailing paradigm. Before discussing further the role of radical behaviourism in this process, it is necessary to summarise its mode of explanation.

RADICAL BEHAVIOURISM

Approach to Explanation and Theory

The experimental analysis of behaviour described by Skinner (1938, 1963, 1969) comprises three separable elements: operant conditioning, in which environmental factors influence the rate at which behaviour occurs; a single-subject research strategy, which proceeds inductively through the intensive study of individuals rather than through the testing of deductive hypotheses by means of inter-group statistical comparisons; and a philosophical stance, radical behaviourism, which explains behaviour by reference to contingent environmental stimuli, eschewing causal reference to intrapersonal factors (Blackman 1983:45). This discussion is concerned primarily with the last of these, radical behaviourism as 'a philosophy of science concerned with the subject matter and methods of psychology' (Skinner 1963:951; 1974:3).

This philosophical stance is founded upon the assumption that once the environmental factors which affect the rate at which behavioural responses occur have been identified, the behaviour in question has been explained (Skinner 1950). Thus, 'Behaviour which operates upon the environment to produce consequences ("operant" behaviour) can be studied by arranging environments in which specific consequences are contingent upon it. The contingencies under investigation have become steadily more complex, and one by one, they are taking over the explanatory functions previously assigned to personalities, states of mind, feelings, traits of character, purposes and intentions' (Skinner 1971:18). The essence of radical behaviourism's explanatory mode is the finding, derived from many rigorously-controlled experiments, that the consequences of

behaviour come to shape and maintain it when they are contingent upon its performance. When the probability of a response's being repeated under similar conditions increases, its contingent consequences are termed 'reinforcers' and the response which produces them is known as an 'operant'. Reinforcement refers always to the strengthening of a response, i.e. to an increase in the probability of its being repeated. A contingent response which is followed by a decrease in the frequency of response is a 'punisher'. Operants on the one hand and reinforcers/punishers on the other are defined in mutually dependent ways: responses should not be labeled operant unless their rate of emission is influenced by their consequences; no event is a reinforcer or punisher unless it consistently affects the rate of emission of a preceding response. So reinforces/punishers are functionally defined in relation to operants; i.e. they are said to reinforce or punish becuase they are related to changes in the rate of performance of actions, not because they are intrinsically rewarding or painful.

The contingencies of reinforcement which provide the basis of explanation within this frame of reference comprise the behaviour in question, the setting conditions or situation in which it occurs, and those of its consequences which affect the rate at which it subsequently occurs. Skinner (1953: 107-110) defines a 'three-term contingency' in which a discriminative stimulus (Sd) is a physical or personal element of a situation which marks the occasion for the reinforcement of a given response, the Sd having previously been paired with the reinforcer in question. The reinforcing stimulus (Sr) is contingent upon the emission of that response (R). The resulting triad - Sd $\rightarrow$ R $\rightarrow$ Sr - summarises the paradigm (Keehn 1969;

Valentine 1982) and has been employed as a unique explanatory device in marketing and sociology as well as psychology, though with varying degrees of concession to elements of the cognitive paradigm (Berry 1968, 1969; Berry and Kunkel 1970; Hamblin and Kunkel 1977; Homans 1974; Kunkel 1966, 1967; Kunkel and Berry 1968; Markin and Narayana 1976).

Explanation of behaviour in terms of contingencies of reinforcement is distinct from that of the stimulus-response psychology (based upon respondent/classical conditioning)which finds minor application in consumer research (McSweeney and Bierley 1984; cf. Gorn 1982; Milliman 1982). In classical conditioning, through the pairing of two antecedent stimuli, each on its own comes to elicit a given response, whereas previously only one had been capable of doing this. By contrast, in operant conditioning, 'Behaviour is shaped and maintained by its consequences' (Skinner 1972:18). More technically, as we have seen, the rate of emission of a response is explained in terms of reinforcement contingencies. Whilst, within the radical behaviourist framework, behaviour may be described as coming under stimulus control when responses are differentially reinforced in the presence of separate antecedent stimuli, the relationship between a discriminative stimulus and an operant does not involve the automatic elicitation of reflexive behaviour as in classical conditioning. Rather, the discriminative stimulus is described as altering the probability of an individual's emitting the operant. If the reinforcing stimulus is withdrawn, then the response ceases: though there may be a time-lag between withdrawal and cessation when the antecedent stimulus is still presented, the response finally extinguishes, irrespective of that presence. Because operant behaviour is said to be emitted by

the individual rather than elicited by a preceding stimulus, it is sometimes said to be 'voluntary'. However, 'voluntary' does not imply that operant behaviour is under 'conscious control' (pace Nord and Peter 1980:38). The radical behaviorist insists that when the other variables which control behaviour - notably succeeding reinforcing stimuli - that behaviour can be fully explained in terms of environmental factors. Like the 'involuntary' behaviour which is elicited in the course of classical conditioning, operant behaviour is externally controlled: what differs is the sort of control involved (Skinner 1953: 110-112). In neither case, however, is consciousness involved in the explanation of behaviour.

Radical behaviourism is, like any other explanatory system, theory-laden. It offers explanation of a particular aspect of a subset of responses, the rate at which operants are emitted. The extrapolation from simple to complex behaviours which has been involved in the explanation of much human social behaviour by radical behaviourists is based upon extensive theoretical assumptions (Broadbent 1961: 182-183). Whilst its analysis depends upon data gathered in the investigation of specific bits of rat and pigeon behaviour, its explanations are advanced in terms of 'the effects of environmental conditions on behaviour' and are 'generalised to apply to human as well as animal behaviour' (Blackman 1983:42). Like any other perspective, radical behaviourism is a way of seeing (and of not seeing) and is based upon a partial view of man. It is necessary to state this because radical behaviourism is sometimes presented as atheoretical. Nevertheless, the critique that Skinner presents of certain forms of theory is instructive for consumer researchers. Radical behaviourism rejects explanations of observed behaviour

in terms derived from another realm of discourse than that in which the behaviour itself is described - be it mental, neural or conceptual. Thus it rejects 'appeals to events taking place somewhere else, at some other level of observation, described in different terms, and measured, if at all, in different dimensions' (Skinner 1950:193). Such 'explanations' infer the explicative events - say, 'attitudes' or 'intentions' - from the very behaviours they purport to explain. They add nothing to observation but simply redescribe what has been observed. (The requirement that explanation should add to description, increasing knowledge rather than restating explicanda in alternative terms is shared by many philosophers of science and psychologists who are not behaviourists; see, for instance, Boden 1972; Harre 1960; Paxton 1976; Valentine 1982). Functional analysis, of the type he has pioneered, is according to Skinner (1950: 193-195), more direct a route to knowledge than that offered by cognitive psychology and it avoids unresolvable philosophical issues such as the mental causation of physical events (see also Ryle 1949; Skinner 1978).

Whilst radical behaviourism rejects the explanation of observables in terms of internal states (which are covert and private), it does neither denies nor (pace Nord and Peter 1980:36) fails to consider them. It does, however, interpret feelings and sensations as aspects of the physical body, as responses which are subject to the same environmental control as other, publicly ascertainable and verifiable behaviours (Skinner 1974: 16-18; cf. Blackman 1980:103-105; Sheldon 1982:92-4).

Treatment of Persuasion and Choice

According to this philosophical stance, choice is not the outcome of internal, mental deliberation, 'psychological decision

processes´: it is simply a behaviour, the only way of acting in a given set of circumstances defined in terms of controlling contingencies. Situations in which individuals report that they have to make choices are those in which several responses are equally probable, i.e. in which the contingencies of each response are functionally similar. Such situations are usually aversive and ´any decision-making behaviour which strengthens one response and makes the other unlikely is reinforced´ (Skinner 1974: 22-23). Freedom is portrayed in this context as the avoidance of aversive consequences, a denial of the existential freedom posited by most cognitive and phenomenological theories of behaviour (Skinner 1972),

In contrast to the cognitive school, in which the formation of attitudes and intentions is seen as a mechanism of prebehavioural choice (Ajzen and Fishbein 1980; Fishbein and Ajzen 1975), the radical behaviourist finds no place in his explanatory mode for the concept of a ´true´ attitude which mediates both statements of attitude and intention, and overt behaviour. Verbal and other classes of behaviour with respect to an object or action are under the control of the various reinforcement contingencies located within the situations in which those behaviours are emitted. Behaviours which belong to different classes (e.g. talking about how one will vote and actually voting) will be consistent only when the contingencies of reinforcement applicable to both are functionally equivalent (DeFleur and Westie 1963). The attempt to predict consumers´ brand choices from statements of purchase intent confirms this. Moreover, since contingencies may vary markedly from situation to situation, verbal and nonverbal behaviours with respect to brand choice can be predicted to differ with the elapse of time. This

prediction of behavioural analysis is entirely borne out by empirical investigations in the marketing framework (Foxall 1984b; Harrell and Bennett 1974; Ryan and Bonfield1975, 1980; Wilson, Mathews and Harvey 1975). In the case of 'low involvement' consumer behaviour (Robertson 1976), there is no need to posit prebehavioural cognitively-based choice (Calder 1979) and prior behaviour assumes explanatory precedence over cognitive variables such as behavioural intentions (Fredericks and Dossett 1983; Bentler and Speckart 1981).

The radical behaviourist explanation of the effects of advertising also proceeds in terms of the three-term contingency. The role of persuasive communications is the presentation of discriminative stimuli which signal the availability of reinforcement contingent upon the operant performance of specific purchase and consumption behaviours. In every instance in which the cognitive psychologist speaks of changing behaviour by acting upon the states of mind assumed to prefigure behaviour, the radical behavioiurist speaks of changing the probabilities of action through the manipulation of reinforcement contingencies. So ingrained is the former approach in marketing psychology that it is worth considering Skinner's (1972: 94) contrasting version of the nature of radical behaviourist explanation: 'We change the way a person looks at something, as well as what he sees when he looks, by changing the contingencies; we do not change something called perception. We change the relative strengths of responses by differential reinforcement of alternative courses of action; we do not change something called a preference. We change the probability of an act by changing a condition of deprivation or aversive stimulation; we do not change a need. We reinforce behaviour in different ways; we do not give a person a purpose or

intention. We change behaviour towards something, not an attitude towards it. We sample and change verbal behaviour, not opinions'.

Feelings of confidence or conviction which are taken by CIPP theorists to be prebehavioural causes of purchase (e.g. Lavidge and Steiner 1961) are, to radical behaviourists, effects of those contingent responses which also explain operant responses (Skinner 1972: 95-96). Advertising and other persuasive messages portray discriminative stimuli in the form of rules, suggestions, norms, promises, prompts and other verbal and nonverbal descriptions of contingencies. These discriminative stimuli exert partial control over behaviour but the main source of control is the contingencies themselves. The individual must have some tendency to behave in the advocated manner before the discriminative stimuli contained in the message can exert control by marking the occasion for reinforcement; his unique reinforcement history determines whether the message's discriminative stimuli signal reinforcing, punishing or neutral stimuli and, unless the appropriate behavioural discriminations have been learned, advertising cannot change his behaviour (Skinner 1972:93).

THE EXPLANATION OF INNOVATIVE BEHAVIOUR

In line with Feyerabend's advocacy of the proliferation of tenaciously-held views as an essential component of scientific progress, it has been maintained in this paper that the chief role of the radical behaviourist paradigm (RBP) in consumer psychology is the provision of a critical stance, a counterpoint to the prevailing paradigm's explanatory mode. The work of adherents of the RBP is thus likely to expose the underlying assumptions of the CIPP which would otherwise be taken for granted and not subjected to criticism. Behavioural psychology has performed a similar role in the reevaluation of at least one industrial sociological investigation, the Hawthorne experiments, elucidating in a way that had not previously been achieved the procedures and practices which led to the so-called 'Hawthorne effect' (Parsons 1974). This section provides an example of the use of radical behaviourism in the consumer field in order to stimulate reexamination of another important concept, consumer innovativeness.

Innovative Behaviour in the CIPP

The theory of consumer innovativeness advanced by Midgley and Dowling (1978) makes relatively sophisticated use of unobservables whilst attempting to avoid the excessive use of trait-behaviour approaches to the explanation of observed action. These authors argue that the explanation of observed innovative behaviour must take into account the situational, especially social, factors which mediate personal variables and overt action (cf. Mischel 1968). The various measures of consumer innovativeness which have been employed by researchers and their apparent relationships to distinct definitions of this construct (Kohn and Jacoby 1973; Robertson and Myers 1969; Summers 1971)

are taken by Midgley and Dowling as indicative of degrees of innovativeness: each extent of innovative behaviour measured requires explantion in terms of successively more abstract constructions of a personality trait, 'innovativeness'. Thus, at the observational level, innovative behaviour is adequately represesented by the idea of the relative time of adoption of a single innovation; this 'actualised innovativeness' is the sole concept and measure of innovative behavaviour employed by many researchers (see Rogers 1983: 22). The measurement of innovative behaviour by means of a cross-sectional technique (Myers and Robertson 1969; Robertson 1971) reveals the adoption by some consumers of a multiplicity of discrete innovations within a product category. Midgley and Dowling (1978: 231) comment that, 'In essence, the cross-sectional technique measures a deeper and more abstract construct of innovativeness and one which is closer to some basic expression of an individual's personality'. The measurement of consumer innovation across several product fields by means of an extended cross-sectional methodology (Summers 1971) is interpreted by these authors (1978: 231) as indicative of 'innovativeness implicitly conceived and measured at a third, yet higher, level of abstraction, namely with respect to all, or at least many, consumer product categories, thus approaching the idea of innovativeness as a generalised personality trait', 'innate innovativeness'.

Central to this approach is the belief that observed or reported innovative behaviour can be explained only by the use of 'constructs postulated at a higher (nonobservable) level of abstraction which, precisely because they are not tied to specific innovations or specific measurement devices, can explain both individuals' overt behaviour over several innovations and

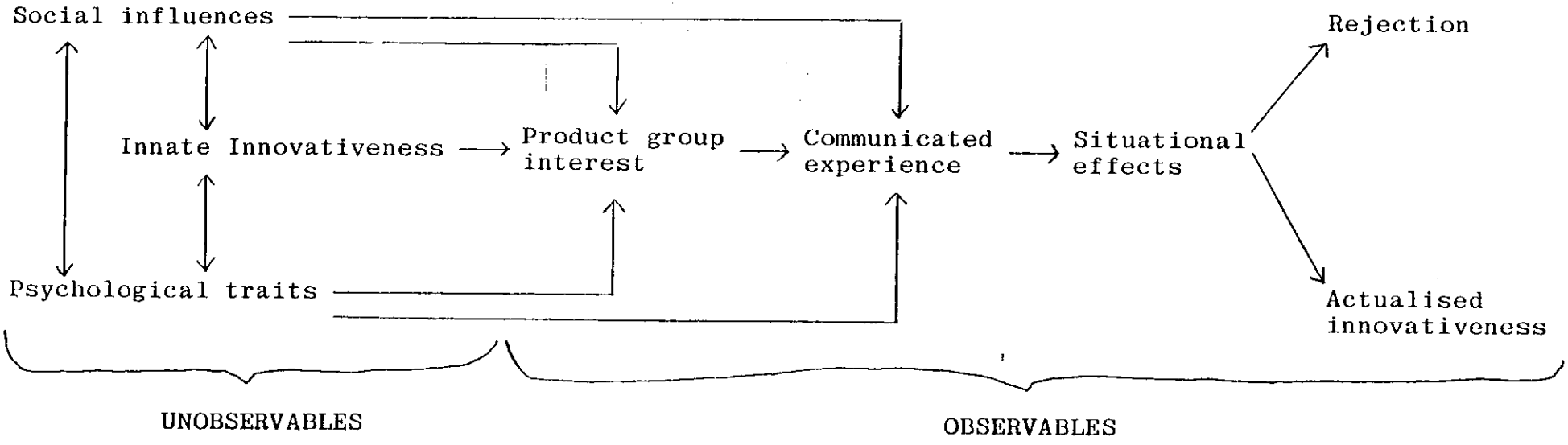
the measurements we obtain with different methodologies´ (Midgley and Dowling 1978: 232). The concept of innate innovativeness, a hypothetical construct existing only in the investigator´s mind (Bunge 1967), reaches the required level of abstraction in that it can account for the differing extents of innovative behaviour exhibited by consumers in diverse situations. Innate innovativeness is defined, moreover, as ´the degree to which an individual makes innovation decisions independently of the communicated experience of others´ (Midgley 1977: 49) and Midgley and Dowling (1978: 235-236) make it clear that ´decision-making´ is an unobservable, a prebehavioural event not accessible to measurements of overt behaviour. It is a derivate of unspecified personality traits, possessed by all individuals who differ in terms of the amount of information they require from others before making an ´innovation decision´. The extent to which innate innovativeness is actualised as the relatively early purchase of new products is determined by intervening situational factors (see Figure 1).

(Figure 1 about here)

Midgley and Dowling´s theory is one of the more painstaking and considered uses of a philosophy of science in which elements of individual personality are assumed necessary to explanation in addition to or instead of constructs which relate exclusively to the environement in which behaviour occurs. Their formulation avoids the most simplistic psychologism which sometimes masquerades as explanation in consumer research that uncritically attributes observed behaviours to underlying traits; nevertheless, it has evident recourse to the abstraction of an unobservable, conceptual, controlling personality trait and thus falls within the confines of the CIPP.

Figure 1

Midgley-Dowling Model of Consumer Innovativeness[3]



Source: Redrawn from Midgley and Dowling (1978)

Innovative Behaviour in the RBP

The radical behaviourist explanation of innovative buying proceeds in terms of the external antecedents and consequences of that behaviour rather than actual or hypothetical personality traits. Innovative behaviour is, within this framework, explicable entirely in terms of the prevailing contingencies of reinforcement; if the term 'decision-making' is employed at all, it refers to a behaviour, the innovative action itself or a verbal description of the consumer's own future behaviour. As Midgley and Dowling rightly imply, it is necessary to consider innovative buying at a more molar level of analysis than that inherent in simple trait-behaviour models; but in the RBP such explanation would not require the postulation of an unobservable 'innate' innovativeness. How then might such explanation proceed? Innovative behaviour does not suddenly appear. It is shaped, as successive approximations to the terminal response of new product purchasing are differentially reinforced. Indeed, shaping is a very widespread phenomenon which accounts for the acquisition of novel responses. In laboratory experiments, pigeons acquired the response of holding their heads high as the endpoint of a procedure in which responses similar to this had been differentially reinforced. Initially, only slight movements of the head were reinforced; thereafter, responses which came successively closer to neck-stretching were reinforced; finally, it was necessary to reinforce only the final, complete response. Similarly, the RBP would lead to the hypothesis that a consumer who appears to innovate suddenly by purchasing a full wardrobe of fashionable clothes does not do so spontaneously but as the endpoint in a process in which similar - indeed, increasingly similar - behaviour has been successively reinforced. The

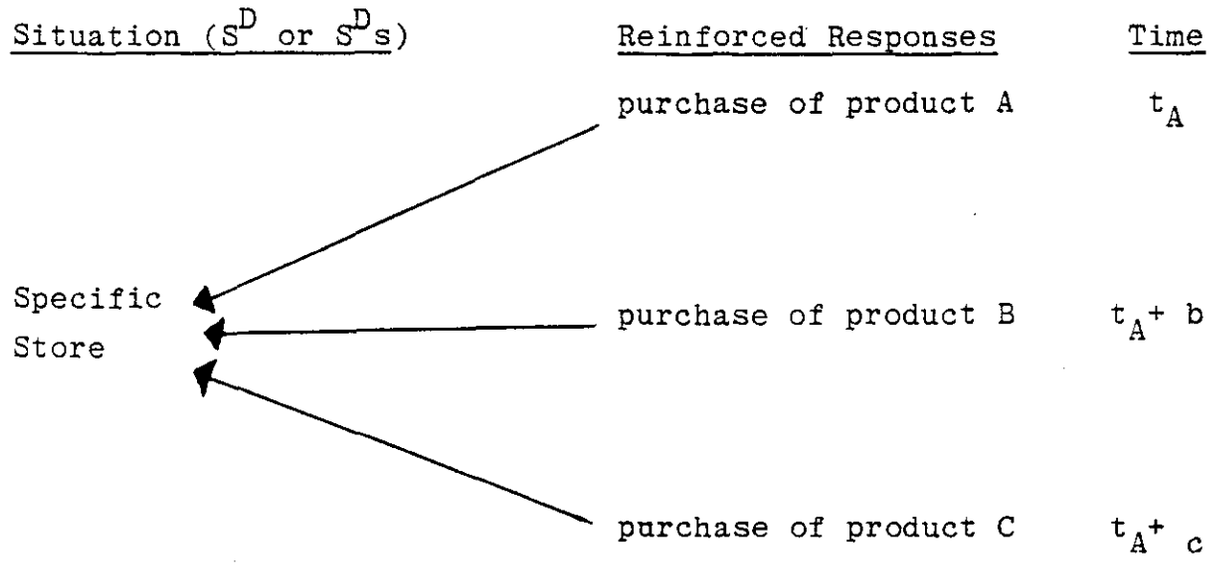
investigator would thus look for a pattern of shaping responses (say, the purchase of fashionable shoes, a trend-setting suit, and so on), a pattern of antecedent discriminative stimuli and succeeding reinforcing stimuli, to explain and predict the purchase of new clothes. Managers actively use shaping in order to increase the likelihood of a 'final' response, such as the purchase of their new brands, by such means as the distribution of free samples; if the use of the product is itself reinforced, then the next step, actual purchase of the distributed brand becomes more probable. Initial purchase of newly-marketed products is also differentially reinforced (compared with the way in which buying existing brands is reinforced) by means of coupons, money-off offers and other promotional deals; consumer behaviour is thereby shaped, as the terminal response - purchase of the brand at the full retail price - becomes more likely. Complex behaviour, which appears innovative to onlookers who are not familiar with the individual consumer's reinforcement history, may also be explained as the final link in a chain of reinforced responses which culminate in the observed response; the chain is created ane maintained as discriminative stimuli come to function as conditioned reinforcers (Skinner 1953: 91-98, 224; see also Kazdin 1980: 39-44).

The endpoint of either shaping or chaining might be the purchase of a single product or several products within a range or across ranges, depending upon the conceptualisation of behavioural units employed. The range of buying would be explicable in terms of the extent to which the responses involved come under stimulus control which depends in turn upon the availability of the appropriate discriminative stimuli. In the case of discriminative learning, the range would be small.

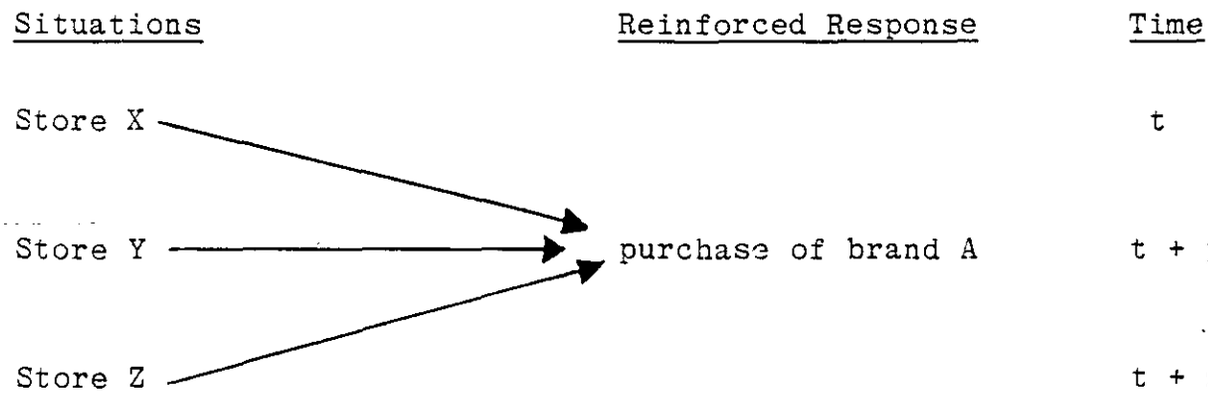
However, either stimuli or responses may be generalised (a process which is the reverse of discrimination) so that a given response occurs in multiple situations or a given situation is the setting for the emission of numerous related responses (related in terms of their common elements). Generalisation is described in Figure 2. In either case, the behaviours of the individual consumer might be described as 'innovative' by the layman, but they actually involve the learning of a single pattern of behaviour. The ascription of novelty or innovativeness to the observed behaviour is, in some respects, artificial since almost all responses have something in common one with another; as Skinner (1953:94) comments, 'We divide behaviour into hard and fast units and are then surprised to find that the organism disregards the boundaries we have set.' It may be necessary to conceptualise behaviour at a more molar level of analysis than that of the single, specific respondent in order to understand its range and generality. The problem might be resolved by making an element of a response the focal unit of behaviour for investigation but there are practical difficulties in isolating elements (Skinner 1953: 93-94). What is indisputable, however, is that the reinforcement of one response is frequently followed by the strengthening of other responses which are not identical to the first. Herein lies the RBP's means of conceptualising and explaining - in terms of three-term contingencies - the generalisation of purchase response for new produts from item to item within a range and/or across ranges.

~~(Figure 2 about here)~~

Figure 2 - Generalisation



(a) RESPONSE GENERALISATION



(b) STIMULUS GENERALISATION

Contributions of a Behavioural Analysis

The radical behaviourist analysis of consumer new product purchasing suggests a reevaluation of the concept of innovativeness. If the purchase of recently-launched products within and across product ranges can be explained in terms of the generalisation of existing responses, the whole notion of innovative behaviour is called into question. If 'new' patterns of purchasing consist in whole or part of existing behavioural elements, in what sense are they new? Radical behaviourism tends to play down the whole idea of innovation, not because it has no explanation of socalled innovative behaviour but because its explanation stresses continuity, the continuity which is determined by a relatively stable controlling environment, and because it eschews explanatory fictions such as 'innate innovativeness'. The purchase of continuous new products certainly appears, according to this perspective, to require nothing by way of novel concepts: it is entirely explicable in terms of contingencies of reinforcement and the individual's reinforcement history. The continued presentation of discriminative and reinforcing stimuli with respect to recently-launched products within and across product ranges determines the extent of new product purchasing. Given this, what need is there of the ascription to consumers of increasingly abstract conceptual personality traits? What do they purport to add to explanation other than redescription of the observable?

In the case of discontinuous products, novel responses may be learned accidentally in a process akin to that of the evolutionary development of the species: 'As accidental traits, arising from mutations, are selected by their contribution to survival, so accidental variations in behaviour are selected by

their reinforcing consequences' (Skinner 1974:114). But there is little discontinuity in practice. Most products permit trial in which the consequences of purchase and consumption become apparent before adoption or rejection occurs; indeed, comprehensive review of the nature of innovative buying confirms the centrality of this process (Foxall 1984d: 95-105, 128-131). Furthermore, the analysis of new product purchasing in terms of its environmental consequences anchors the researcher's frame of reference more closely to observable behaviour than does that analysis which proceeds in terms of inborn personality traits. The very studies cited by Midgley and Dowling in their search for constructs and terms to describe and 'explain' consumer innovativeness, actually disconfirm the hypothesis that personality variables strongly influence purchase behaviour (Robertson and Myers 1969: 167-168) and draw attention to the need to investigate situational influences (Summers 1971: 316). As has been pointed out, Midgley and Dowling present an elaborate theory of innovativeness which avoids the naivety of some earlier formulations; they take some pains to draw attention to the situational mediation of person and observed behaviour. Given their apparent sophistication, therefore, it is mystifying to encounter their insistence on explaining observed behaviour by reference to an inborn personality trait, vaguely defined as 'a function of a number of (yet to be specified) dimensions of the human personality' (Midgley and Dowling 1978: 235). ~~Is there any doubt that their way of seeing, firmly founded upon the fundamental assumption of the CIPP, restricts rather than extends thought and investigation?~~

The criticisms of this kind of theorising made by Skinner (1950) apply well to Midgley and Dowling's approach. The

'explanation' of observed new product buying in terms of an abstract innate trait existing in some other realm of action simply creates a new problem for theory - that of explaining the trait itself. Such 'explanation' is actually on a par with those long-abandonned explanations which proceed in terms of insticts which, like mental processes, are simply inferred from the explananda. This method of explanation is wasteful, diverting attention from the very situational determinants which these authors claim they wish to emphasise. Indeed, if situational factors are as important as they are anxious to point out, it is difficult to understand why abstract notions of innate personality traits must be posited. Rather, the important task is surely the empirical identification of salient situational factors, the assessment of their effect and the development of explanations which proceed in terms of these environmental determinants. Even if it were argued that radical behaviourism does no more than redescribe observed innovative behaviour in new terms, it must be admitted that those terms relate to an altogether different explanatory mode from that inherent in the CIPP, one which deserves the attention of consumer psychologists interested in the theoretical progress of their discipline.[4]

SUMMARY AND CONCLUSION

Theoretical progress in consumer psychology now requires urgently the generation of alternative explanations to those which proceed in terms of cognitive information processing. Specifically, it requires the development of a theory of consumer choice which avoids as far as is possible the excessive abstraction inherent in the CIPP-based theories. The new theory should offer a standpoint from which consumer researchers may present a critique of the basic mentalistic assumptions upon which the CIPP is founded and should, above all, be amenable to the progressive empirical testing, evaluation and reevaluation which has thus far proved elusive in the case of existing theories. What form should such theorisation take?

Whilst there can be no atheoretical observation, there are degrees of abstraction in scientific explanation; whilst there is no unadorned description of an objective reality, there is a common-sense consensual view of much that is observable. Theoretical development does not necessarily involve a high level of abstraction; whatever unobservables are deemed necessary to make observables intelligible should not be treated as immutable but constructed in such a way as to be capable of critical evaluation, rejection and replacement as progress demands. Unobservables are, in the final analysis, a convenience to researchers and ought not to be used to reify an imagined conceptual world or to confine methodological and explanatory practice within the bounds of a single scientific world view. The most relevant strength which radical behaviourism offers theoretical development in consumer psychology is the closeness of its explanatory propositions to the observed behaviour it is concerned to explain. Its theoretical terms - such as

'reinforcement' and 'generalisation' - are clearly brought to the subject matter of psychology by the investigator, but the success of the system to which they belong lies in their uncomplicated inclusion within the consensual view of a community of investigators and their relatively straightforward subjection to empirical test.

It does not follow that our explanations should or can be couched solely in terms of observables or that we should attempt to embrace an extreme situationistic behaviourism (Bowers 1973) to the exclusion of other paradigms. In the spirit of Feyerabend's epistemological anarchy, such monopoly is unwarranted. But this rejection of a unitary, all-embracing explanatory system applies equally to the rampant psychologism which inheres within the CIPP. It does follow (i) as has been said, that unobservables require a greater empirical content than has previously been the case if they are to contribute to progress through empirical investigation, and (ii) that any central core of theoretical assumption which cannot be subjected to direct empirical test (Lakatos 1970), should be plainly articulated in order that it may be the subject of comparison with the principles of other paradigms and logically criticised from their standpoint. Unobservables would have greater empirical content if they took the form of extrapolations from observables (consensually agreed) rather than that of constructs posited to exist in some other realm of discourse and requiring - but rarely finding - elaborate rules of correspondence before testing can occur. Such extrapolations are already available in other approaches to social and economic theory: the profit-maximising firm of neoclassical economic theory is an example of a concept which has no direct empirical correspondent but which is

nevertheless recognisable from observations of business organisations and capable of giving rise to testable hypotheses concerning those actual companies. The central assumptions of the theory are not open to empirical test but the hypotheses which those assumptions make possible are testable and substitutable (see, for instance, Baumol 1959; Marris 1964; Simon 1959, 1976; Wiseman 1983). Microeconomics has evolved both a structure of theory and a process of theorisation (Bagozzi 1984:11) which are open to progress in ways which are closed to contemporary consumer psychology. Part of the success of neoclassical economics results from the closeness of its ubobservables to observation. By offering a tried and tested framework of similarly well-grounded theoretical terms radical behaviourism offers a 'healthy antidote to the prevalent loose mentalsim' (Valentine 1982:109) that dominates consumer psychology. The accurate and rigorous use of this paradigm would provide a much-needed standpoint from which to conduct a thorough critique of the prevailing paradigm, forcing its assumptions into the open and offering alternative explanations which would otherwise be ignored, misunderstood or misrepresented. In short, it would contribute to the interplay of tenaciously held views which is an essential ingredient of theoretical progress[4].

NOTES

1. Skinner (1974) has stated that he does not write as the behaviourist. In the course of this paper, it is necessary to make multiple references to his work in order to present an account of radical behaviourism as a philosophy of science, without, of course, implying that his is the sole significant contribution.

2. Lakatos (1970) has spoken in similar vein of a research programme; what each appears to have in mind is a scientific community's professional Weltanschauung. Thelen and Withal (1949) note that the researcher 'perceives and interprets events by means of a conceptual structure of generalisations or contexts, postulates about what is essential, assumptions about what is valuable, attitudes about what is possible, and ideas about what will work'. They referred to that conceptual structure as a 'frame of reference', a term broadly synonymous with 'paradigm' in this paper.

3. The terms 'unobservable' and 'observable' have been used respectively in place of Midgley and Dowling's 'conceptual field' and 'phenomenal field' and are understood to be equivalent. However, to distinguish observables and unobservables is to use a convenient dichotomy which ultimately breaks down (Bagozzi 1984). 'Product group interest' and 'communicated experience' could, for instance, be viewed as unobservables (albeit inferred from behaviour) or redescriptions of that behaviour itself.

4. It is also probable that radical behaviourism itself would develop further as an explanatory system. For instance, the hypothetico-deductive approach to explanation which is not generally part of research programmes in operant psychology, but which has been successfuly employed in social theory based upon

that psychological paradigm (Hamblin and Kunkel 1977) and which is an inevitable concomitant of theory-ladenness would receive greater attention. More fundamental change might also occur. It is appropriate to note, for instance, the emphasis placed upon the probabilistic relationships which may exist between the elements of the three-term contingency. Blackman (1983:102-103) describes the contingencies of reinforcement as

A:B:C

in which A = antecedent conditions (the setting in which behaviour occurs);

B = behaviour;

C = consequences.

The colons suggest a correlational relationship in each case, relaxing the assumption of automaticity which occurs in many accounts of radical behaviourist thought, especially with respect to behaviour and its consequnces. Blackman points out that consequences may follow behaviour only occasionally, or after delay; they may fail to reinforce behaviour or decrease rather than increase its rate of emission. The formulation of reinforcement contingencies presented in the text in terms of Sd, R and Sr is thus a subset of Blackmand's A:B:C, that in which the antecedent conditions act as discriminative stimuli and in which the consequences of behaviour reinforce it.

4. For further discussion of the type of research which the behavioural perspective may lead, see Foxall (1986a, b).

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