Rationality and Social Representations: some Notes on the Relationship between Rational Choice Theory and Social Representations Theory

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Abstract: This paper analyses the problem of unidirectional causal explanations in conceptions of rationality. First, three classical conceptions in social science are presented: the cultural-ideological conception, the formal logical conception and the theory of games. Second, the problem of the consistency between beliefs and decisions is discussed with regard to expectancy-value models. We consider that social psychology's approaches to rational choice are framed within methodological individualism. The model of social representations offers the possibility to analyze in depth the relations between the macro and micro processes playing a role in rational choice. It helps us to embed rational choice in a more social context.

The analysis of the relationship between belief systems and behaviour in social sciences in general and in social psychology specifically has been as productive and heuristic as it has been confusing and problematic. It is productive and heuristic because a substantial number of concepts, theories and processes developed in social psychology are based on the relationship between beliefs and behaviour. According to this approach, which is anchored in common sense and founded on Indo-European thought (McGuire 1986) there is a relationship between what people (say they) think and what they (say they) do. This 'rationality' that human behaviour supposedly has is also confusing and problematic and from the beginning of modern social science it has been severely criticized at the meta-theoretical, methodological and theoretical levels.

What is understood by 'rational' when discussing belief systems and their relationship to behaviour(al decisions) can still be considered as 'a problem to be solved'. Lukes (1970), for example, emphasizes that 'the use of the term rational and its cognates has caused great confusion and obscurity', as it conveys different meanings and semantic uses (for example: rational decision making, rational behaviour, etc.). In fact, this term has become one of the most complex terms of social sciences (Seliktar 1986).

This paper focuses on identifying the problems inherent in unidirectional causal explanatory models when applied to rationality and to models of consistency between beliefs and behaviours. Later, some heuristic perspectives that Social Representation Theory can offer regarding these issues will be discussed.

Three conceptions of rationality

In this section we present three conceptions of rationality. The first is cultural-ideological (Boudon 1986), the second formal logical (Langer 1967) and the third one is based on Von Neumann & Morgenstern's theory of games (1944).

According to Boudon (1986) there are two basic conceptions of rationality. One is culture-based and the other utilitarian. The first, which is wider, stems from Weber and has a strong culturalistic connotation. It integrates the Weberian concepts of axiological rationality, i.e. behaviour that is suitable for certain values, and of teleological rationality, i.e. behaviour suitable for the achievement of goals by efficient means. So, a rational decision or behaviour would be one which is based on 'good reasons' (attitudes, beliefs) in a specific situation and culture.

A second and more restrictive conception is that of utilitarian rationality. In this case, the rational actor is somebody who, using the most appropriate means, tries to achieve the goals that are in agreement with his or her interests. This is a specific form of the aforementioned culturalistic rationality. In fact, this 'utilitarian rationality' would be a specific case of the social conventions that are culturally situated. According to Harré (1986, 13) 'Human rationality is not an individual phenomenon and it has to be understood in terms of social conventions'. Social psychology, for example, emphasizes this last type of restrictive utilitarian rationality when referring to rational decision making.

The definition which stems from formal logic is founded on some 'basic propositions' (Langer 1967). In this way the requirements of formal logic would define the parameters of rational decision. The first parameter is that of consistency in preferences for outcomes: if Outcome O_1 is preferred to O_2, outcome O_2 cannot simultaneously be preferred to O_1. The second parameter is the instrumentality of actions relative to results: if O_1 is preferred to O_2, decision D_1 should be preferred to decision D_2, given that D_1 leads to O_1 and D_2 leads to O_2. The third parameter is that of transitivity: if O_1 is preferred to O_2 and O_2 to O_3, then O_1 should be preferred to O_3.

Experimental and cross-cultural findings, however, provide evidence against these propositions because of their restrictive nature. The idea of restriction is important here. If it is not properly considered, a certain behaviour could be labeled as irrational if one does not take into account other elements. For instance, Rapoport (1969) refers to the continual violation of the consistency parameter by those Catholics who prefer having meat to fish but choose to have fish on Fridays.

The third definition of rationality comes from Von Neumann & Morgenstern's work on the theory of games. According to this theory the paradigm of rational behaviour of an individual is based on the Minimax principle. This principle claims that the rational decision maker tries to maximize his utilities at minimum cost. The problem with this approach is the existence of individual and cross-cultural differences and the fact that it was developed within laboratory contexts. Billig (1976), for example, observed deviations from expected rational behaviour when working with the Prisoner's Dilemma and the ACME-BOLT trucks.

Nowadays rationality is usually seen as a process by which people select their means to achieve their goals. This 'means-goals' rationality is based on a phenomenological postulate which assumes that the subjects' individual and social perceptions define the context of the decision. According to this view, decision makers are 'intuitive scientists' who use causal explanations and formal logic (Gross-Stein et al 1980).

Expectancy-value models and the issue of consistency between beliefs and decisions

Decision Making and Expected Value

The theory of 'rational' decision making considers the analysis of the choices made by 'rational' subjects as the main phenomenon to be investigated. Here, the term 'rationality' does not necessarily have ethical or conscious connotations as, for example, in the relationship between decisions and expected consequences. To a great extent this is an utilitarian concept based on the comparison between costs and expected benefits. The most developed models within this approach are the utility and expectancy value models. Although there have been different proposals, recent developments tend to focus on reformulating the value and expectation parameters rather than building alternative paradigms.

These developments are basically rooted in three principles (Abelson & Levy 1985):

a) The principle of Expected Value. This principle prescribes the maximization of expected value and it is the corner-stone of the utilitarian theories of rationality as well as the origin of the algebraic-axiomatic models of utility and expectancy. .

b) The principle of expected utility. Bernoulli, a mathematician in the eighteenth century, already recognized the difficulty to predictive human choices by the expected value principle (see Sommer 1954). He proposed the alternative principle of expected utility. Bernoulli came to the conclusion that the psychological value of money did not increase proportionally to the increase of its nominal amount. He suggested a logarithmic function to relate the utility U of money to its amount X. This function pictures a concave rather than a linear or a decreasing value of marginal utility. Thus, he found that adding more and more money results in a decreasing added utility. That is to say, the subject's decision is better predicted by expected utility than by the nominal expected value.

The term utility differs from value because the same amount can be evaluated differently by different people in different situations.

However, according to the principle of expected utility, it is difficult to see why gambling is so popular. Gambling, when there are small chances to win a great amount of money (lottery, the pools etc.), should not appeal to people because of the concavity of the function. It implies a lower utility for the chance to win a great amount of money than for a higher chance to win less money. Another example is that of smokers. If smokers accepted the evidence that smoking produces lung cancer, giving up smoking would be the 'rational' behaviour to follow. However, some smokers tend to minimize their subjective estimation of risk or in other cases they do not feel confident enough about their capacity for giving up smoking. If the decision to make is to give up smoking or not, the decision to continue can be subjectively rational for those smokers who are convinced that if they gave up smoking they would soon start again.

c) The principle of Subjective Expected Utility : Savage (1954) suggests a model which has the same structure as Von Neumann & Morgenstern's but which solves some of the empirical difficulties inherent in the theory of expected utility. These difficulties are:

i) The model of expected utility cannot be applied to situations in which the decision maker does not know 'a priori' how likely the results are to happen.

ii) The model of expected utility does not consider the possibility of the decision maker using a probability that is different from the objective probability of the results.

In order to solve these problems Savage presents the concept of 'subjective probability'

instead of 'objective probability' as used before. Subjective probability refers to the likelihood the decision maker attributes to the results. It has important implications for social behaviour. The shift from objective probabilities and values to subjective estimates and desires is essential in order to apply the concepts of expected utility to psychological problems.

The theories of Expected Value are used in different areas, the attitude model of Fishbein & Ajzen (1975; 1980) being one of the most widely known. According to Fishbein & Ajzen, attitudes are conceived as the sum of beliefs about the consequences weighted by their evaluations.

Although research concerning these principles was not conducted within the realm of attitudes, the model of Fishbein & Ajzen is applied also to this issue. In fact, the authors propose a relationship between beliefs (probabilities and values) and attitudes (expected subjective utilities) and suggest a relationship between attitude (expected subjective utilities) and behaviour, assuming that people will make the choice to which they have assigned the highest subjective utility.

The theory of expected value makes several proposals related to the analysis of attitudes (expected value, expected subjective utility, attribution by evaluation, etc.) (see Feather 1982). As McGuire (1985) points out, this theory, whose mathematical formulation has been provided by the models of Edwards (1954) and Savage (1954), became popular in the functionalistic study of attitudes in the 50's. The theory was later applied to the relationship between attitudes and behaviour by the school of Michigan (Rosenberg 1956; Atkinson 1958) and the school of Illinois (Fishbein 1963, Triandis 1977; Ajzen & Fishbein 1980; Ajzen 1985).

The theory of decision making has developed along two separate paths in the study of attitudes:

i) It has been considered a *predictive tool*. Without questioning the validity of the theory, this path tends to develop theories to predict behaviour. The main exponent here is the model of Fishbein & Ajzen.

ii) The second path seeks to develop the analysis of the *processes* related to behavioural decisions. This development takes a mediational perspective in the analysis of consistency of attitudes (process model) as well as towards the contribution of social cognition (heuristics, memory, information processing, schemata, social representations).

The Model of Fishbein & Ajzen

This model is widely known and used in social psychology. In spite of the fact that it has been remarkably successful as a predictive model it has also been severely criticized. Most criticisms deal with the leading assumptions concerning the causal links between attitude, subjective norms, behavioural intention and subsequent behaviour. Even though Fishbein & Ajzen (1975) accept that behaviour can produce feedback which will influence attitudes and subjective norms, the model remains inexorably unidirectional as far as the sequence of causal steps is concerned.

The problem of the unidirectionality of causal steps has been tried to solve by integrating the 'previous experience' assumption. This assumption helps to eliminate the non-historical sense of the model and it is useful because it integrates the 'process of rational decision' as well as the 'process of rationalization' within the issue of consistency. That is to say, it assumes that the social actor is not only a 'rational actor' but also a 'rationalizing actor'. In fact, people do not only behave according to their beliefs but they also change their beliefs according to their behaviour (Beauvois & Joule 1984). Therefore the recursive model of

social representations about the relationship between stimulus and response (Moscovici 1984) can help to see this issue from a different perspective.

The issue of consistency between beliefs and behavioural decisions draws attention towards at least four dimensions which deserve further consideration:

1. The importance of affect and emotion in decision making.
2. The instability of valences and expectations.
3. The normativity of the model.
4. The non maximizing rules of decisions such as scripts.

In sum, on the one hand, the models of expectancy value reproduce the cognitive models of decision making in situations with a medium level of anxiety provided the subject has enough time to look for consistency. In this context the model is valid. On the other hand, heuristics and cognitive biases will appear in situations with high levels of anxiety and/or time pressures in decision making. Furthermore, when the decision maker is in a low anxiety situation or when involved in ritual or repetitive behaviours, the decision will be guided by situational clues and scripts will play a prominent role. It is important to remember that cognitive dissonance research is based on the idea that besides being rational beings humans also are rationalizing beings. Hence, the integration of both processes will be a necessary element in explanations of the complex relationship between beliefs and behaviour.

A wider approach to consistency implies to consider some basic premises. First, we maintain that behaviour involves *meaning* and human beings can express the same meaning in different ways by judgments, decisions and courses of action. For this reason it is necessary to emphasize the common aspects of human beings' 'output' activities in the same way as traditional research dealing with self-reports makes a conceptual distinction between self-reports and behaviour. Second, in the past, behaviour has too often been studied as an *isolated* category of human performance, that is to say, as a phenomenon which is to be predicted from judgment without explaining the mechanisms establishing the social-psychological links between preparatory activity and final response.

Discussion

Social psychology's approach to the rational choice can be framed within methodological individualism. The theory of social representations, meta-theoretically closer to realism (Bhaskar 1983) than to the new standard view of science, helps to see the analysis of rational choice in a more social context. In such a context we have to consider the interdependence between the decisions taken by different social actors. The social representations model also enables us to study the relationships between the macro and micro processes that play a role in rational choice. Doise's levels of analysis approach (1983) is relevant in this context. Furthermore, paraphrasing the anthropological concept of cultural pattern, a social representation can be re-interpreted as "the range of acceptable possible alternatives from which people may choose a course of action" (Handel 1979). That is to say, social representations set the agenda for decision making.

The recursive model of social representations allows to overcome unidirectional causality in social psychological analysis. "Social representations determine both the character of the stimulus and the response it elicits, just as in a particular situation they determine which is which" (Moscovici 1984). Decision makers are "intuitive scientists" who construct social explanations. In this sense the theory of social representations sheds light not only the reasons why specific decisions are made but also on the way how social actors arrive at

them.

The functions fulfilled by social representations help to see the rationalistic and the rationalizing model as parts of a recursive explanatory system. On the one hand, some research finds representations in general and social representations in particular to be rationalizations, i.e. explanations or justifications of previous social practices by individuals or groups (Joule & Beauvois 1987; Beauvois 1984; Beauvois & Joule 1981). From this point of view, social representations result from changes in practices (Guimelli 1989; Jodelet 1989). On the other hand, other research suggests representations to be transpositions of ideological discourses within by social groups (Amerio 1987; Scarbrough 1990). According to this perspective social representations are antecedents of behavior, anchored in the wider belief system shared by a group. We think that the recursive model of social representations holds an intermediate position between these two perspectives[1]. Social representations must be viewed as rationalizations of previous social practices and as transpositions of previous values and ideologies held by individuals and groups. Following Harré (1981, 214) "action draws our attention to the unfolding structured sequence of actions by which the actors, in role, perform the acts called upon by the public demands of the situation and setting in which they are found themselves". In that way, not only rational behaviour but also compulsive or impulsive behaviour can be explained.

The analysis of social representations also allows to integrate functional and intentional explanations (for instance the analysis of social representations and intergroup relationships and the functions for the groups) and causal explanations (the analysis of structures and the genesis of social representations). One needs to remember that the action implies goals and intentions. That is why the theory of social representations entails inquiring the social actor's causes and reasons: reasons may also be causes of actions (Secord 1986).

By integrating the concept of understanding, the theory of social representations also goes beyond the equation 'explanation equals prediction'. One may remember that the criticism of normativity in the process of decision making in social psychology is based on its claim to predict behaviour. Assuming an explanatory concept that is closer to "causal tendencies within the complex and open systems" (Outhwite 1987) than to "nomologic deduction" would certainly help to explain behavioural trends as well as to understanding social behaviour. In this sense, a social representations approach defines an agenda which i) introduces the notion of probability into explanation; which ii) helps to identify the degree of variance among social groups and across time by the notion of a set of alternatives; and which. iii) provides a framework for investigating the interaction of collective, social, and individual beliefs.

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[1]   There are, however, recient consideration relevant for this polemic. For example , the work of Wagner (1993, 1994) is an interesting example analysing the issue from an epistemological perspective.

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