Review of Sociology Vol. 7 (2001) 1, 21–34

RATIONAL CHOICE THEORY IN SOCIOLOGY AND QUANTITATIVE EMPIRICAL RESEARCH: A SURVEY*

Béla JANKY

TÁRKI Social Research Centre (Budapest, Budaörsi út 45. P. O. Box 1518, Pf. 71. H-1112) and Department of Sociology and Communication, Budapest University of Technology and Economics, Budapest, Egry József u. 20–22. H-1111; e-mail: janky@tarki.hu

Abstract: Metatheoretical studies often characterise rational choice theory (RCT) based empirical research as predominantly qualitative and illustrative. In this short (and selective) methodological survey we investigate the opportunities and limits of quantitative empirical researches that adopt the framework of the RCT paradigm. Unlike many other methodological studies, this paper does not focus on a general comparison of RCT with competing paradigms. Instead, we take the framework of RCT as given, and study the methodological problems RCT researchers face while testing their theoretical models. We survey possible empirical research-strategies, and examine the impact of the level of analysis on model building and on the evaluation of the results. Moreover, we summarise the motivational assumptions of sociological RCT. Besides, we examine those extensions of the RCT that take into account the problem of perception. Afterwards we present a regression technique that is directly build on utility-theory. Finally, a residual method for measuring non-egoistic motivations will be discussed.

Keywords: rational choice theory, survey research, methodology

INTRODUCTION

Metatheoretical studies often characterise rational choice theory-based empirical research (from here on RCT[1]) as predominantly qualitative and illustrative (Green and Shapiro 1994: 6; Blossfeld and Prein 1998a: 5, 8; Opp 1998: 204; Tardos 1998: 8). A recent collection of methodological studies, however, concentrates on the concrete issues of modelling and testing rational choice theories (Hans-Peter Blossfeld and Gerald Prein (eds.): *Rational Choice Theory and Large-Scale Data Analysis*). Unlike many other methodological studies, this book does not focus on a general comparison of RCT with competing paradigms. Instead, the authors take the

* The survey was supported by the Domestic Ph.D. Scholarship Program of the Soros Foundation and by the Dept. of Sociology of the Budapest University of Economic Sciences. The author gratefully acknowledges the comments of Zoltán Szántó and Károly Takács on an earlier version of this paper.

1 For the sake of simplicity, we will use the abbreviation of "RCT" in place of "rational choice theory".

framework of RCT as given, and study the methodological problems RCT researchers face while testing their theoretical models.

Our study follows the approach of the above mentioned volume. We investigate the opportunities and limits of quantitative empirical research in the framework of the rational choice paradigm. However, this study does not offer a survey of the empirical literature. Interested readers can turn to several excellent comprehensive surveys (Friedman and Hechter 1988; Baron and Hannan 1994; Hechter and Kanazawa 1997; Miller 1997; Zafirovski 1999).

Rational Choice Theory is a whole family of theories and models (Hechter and Kanazawa 1997: 194; Blossfeld and Prein 1998a: 5). Following the explication of László Csontos, we refer to RCT as a set of substantive and formal models, as well as a methodological paradigm. Among the RCT models one might find decision theory, game theory, public choice theory and other models of social sciences that are influenced by economic theory. The RCT paradigm is a kind of common platform for these models differentiating them from other approaches (Csontos 1996: 326).[2]

RCT in sociology has two differentiating characteristics. One of these is the central role of interaction structures in the analyses (Abell 1991: xii, a classical example: Marwell, Oliver and Prahl 1988). The other one is the effort to extend the motivational and cognitive basis of the theory. This extension aims at incorporating more behaviour-influencing mechanisms into the utility-maximiser model (see Boudon 1989, 1996; Lindenberg 1989).[3] First of all, RCT sociologists try to take into account those mechanisms that have been neglected by economics and political science, although they are important in sociological theories. In this study we will refer to the results of this latter research program. Moreover, we focus our attention on the methodological issues raised by survey research testing more or less formal models. This study does not provide a comprehensive survey of the methodological problems of all the theories developed within the framework of the paradigm (like the theory of collective action, public choice or social choice theory). Furthermore, the investigation of special measurement problems of social structure research is entirely missing from our analysis. Instead, we will devote our attention to the basic and general dilemmas of the empirical application of RCT.

The study is organised as follows. First, we survey possible empirical research-strategies, and examine the impact of the level of analysis on model building and on the evaluation of the results. In the next section we turn our attention to the motivational assumptions of RCT, then we examine the extensions of the RCT which take into account the problem of perception. Afterwards we describe two statistical methods. First we show a regression technique which is directly built on utility-theory. Finally, a residual method for measuring non-egoistic motivations will be presented.

2 According to some scholars, the rational choice theory and decision theory represent two distinct line of research (Hechter and Kanazawa 1997: 192–193). This type of terminological problems does not play a role in our analysis.

3 We do not want to overestimate the relevance of particular characteristics of sociological RCT. The RCT researchers rather intend to develop more general models of social action, than to restrict the field and methods into one paradigm.

RESEARCH STRATEGIES AND LEVEL OF ANALYSIS

We start with the basic clarification of the concept of a rational decision. Our starting point is the discussion of László Csontos, whose rationality definition suggests that people are willing to achieve certain goals and they use their experience and information to chose the best means for them (Csontos 1996: 329).[4]

Within the framework of RCT one can differentiate between *thick* and *thin* models (Hechter and Kanazawa 1997: 194). Thin models rely on few assumptions about the basic characteristics of preference ordering. They do not examine particular goals or values. Thick models, on the other hand, specify the actors' basic values and goals.[5] However, both types of models have their problems. The proponents of RCT theories prefer to base their explanations on law-like, testable statements (Kelle and Lüdemann 1998: 113). Thin models consist of universal statements, but it is difficult to use these hypotheses in empirical research. Thick models are often testable, but if one adopts the only consensually accepted motivational model of purely self-interested actors, the validity of their predictions will be limited (Kelle and Lüdemann 1998: 113–114). Taking into account these problems, one might suggest the following research strategies.

a) We should have hypotheses about the actors' goals. Specifically, we should have assumptions about the observable explanatory variables of the decisions (Blossefeld and Prein 1998: 14). In case the model failed the test, we should re-examine the assumptions about the particular values and goals (Abell 1992: 203–204). Thus, the validity of the whole paradigm is not an issue. This research strategy is a well-known way of theory development in different sciences, and moreover it is a defendable one (Kelle and Lüdemann 1998: 115).

b) However, we do not have to specify the relative weights of the assumed goals (Harsányi 1969: 520). We can infer the parameters from the empirical data until we achieve a well-based theory about the relative importance of different human goals. If we adopt this strategy, the statements about the existence of certain goals remain testable.

The majority of empirically tested RCT models adopt these rules. However, there are different research strategies within this methodological paradigm.

1. One way is the adoption of so-called normative decision models. The decision rules of normative models are not of a moral character. Instead, they are technical statements (Szántó 1992: 118). These models treat preferences as given, and show the optimal decisions based on the actors' goals. The hypotheses of these models can easily be tested, especially when their motivational assumptions are limited to narrow economic self-interest. If the examined real word decisions can be characterised by a high degree of rationality, the normative models have good predictive power. In other cases they could serve as reference points (Szántó 1992: 118). The presence of differences between the predictions of the model and actual behaviour might allow us to assume the influence of other motivational factors beside narrow self interest, or the existence of cognitive limitations in the perception process of the alternatives and

4 This definition is relatively close to the everyday usage of the term (see Harsányi 1976: 90). Harsányi argues that the scientific definition is more vague. In short, every choice can be seen as rational if it satisfies certain formal rules (Harsányi 1976: 92–93).

5 Between the two extreme, of course, there are mixed versions of thick and thin models.

their consequences. In spite of its limits, this normative modelling strategy may be the most prevalent in RCT sociology studies.

2. Another research strategy concentrates on the possible extensions of rational choice models. No doubt, the recent trend in this directions could be seen as the cornerstone of the development of the paradigm (Lindenberg 1992; Blossfeld and Prein 1998a: 5). This strategy adopts thick models that fit the empirical evidence better. However, at the present state of the theory it is fairly difficult to build simple but general models with strong predictive power. In research practice the extensions of the basic rational choice model rely on the special characteristics of the field examined. Thus, these explanations fit the particular data, but they have limited validity.

3. The two strategies mentioned above could be combined. In this case, the starting point of the analysis is the basic rational choice model, which relies on narrow economic self-interest and the objectively measurable constraints of the decision. If this simple model fails the empirical test, we can gradually introduce more sophisticated assumptions (Abell 1991: xi.).

RCT is a methodological individualist paradigm (e.g. Szántó 1998b). This view is shared by most social theorists, even if we take into account the difficulties one faces when trying to explicate the term in the context of RCT (Orthmayr 1997: 4, 23, 26). According to a number of researchers the individualist approach automatically leads to research focusing on microsocial phenomena (Tardos 1998: 8). However, RCT theorists deny the existence of such a correlation (Szántó 1998a: 89–90.). Nevertheless, the RCT analysis of simple few-person interaction structures is much easier than the adoption of this approach in the research of macro level phenomena. Economics – where RCT has been applied and developed from the very beginning of the modern history of this science –, provides a good example: general choice-based macroeconomic theory was developed much later than basic microeconomic models.

The RCT has, in its present state, very limited predictive power in the explanation of individual behaviour. At the aggregate level, however, the impact of several influencing factors might cancel each other out (Hechter 1994: 326, 328; Hechter and Kanazawa 1997: 194–195; Goldthorpe 1998: 43–44). Of course, the aggregation can diminish noise only if the deviations from the basic model are due to non-systematic individual factors. Any systematic bias should be built into the explanatory model (Frei and Eichenberger 1989).

The analysis of large-scale data sets does not necessarily lead to a model with a complicated multi-player interaction structure. Instead, most studies discuss situations where a relatively small number of persons are involved interdependently, or if there are numerous individuals, their decision constraints are rather similar.

MOTIVATIONAL ASSUMPTIONS

The theoretical and measurement problems are often inseparable. This is also true for the motivational assumptions of RCT models. Thus, we cannot avoid some theoretical issues.

The relative success of economics in the past decades is partly due to its simple but rather generally applicable motivational assumptions (Harsányi 1969: 518),

specifically to the fact that it primarily refers to narrow economic self-interest. Instead, in the case of the application of the theory to non-economic areas, the inclusion of other motivational factors becomes unavoidable. However, the extended model should also be as simple as possible, and the modification should significantly increase its predictive power (Harsányi 1969: 519).

The extension process raises the question of the position of economic self-interest in the more complex model. It is not impossible that biological or cultural evolutional processes fostered the emergence of predominantly altruistic preferences. However, RCT researchers agree that economic self-interest should be the starting point of every motivational model, although the theoretical investigations might try to find additional motivational factors (Abell 1992: 200–201; Hechter and Kanazawa 1997: 194).

There is no consensus about the relevant additional motivational assumptions among RCT researches. If one focuses he/her attention on one special research field, he/she may be able to discover the outlines of a consensual motivational model. This is especially true about theoretical studies or analyses using only illustrative empirical evidence. If one compares different branches of RCT research (e.g., politics, economic co-operation, family issues), however, one might find fairly different assumptions about human motivations. These models cannot simply be merged into a general action theory, because by adding together the different assumptions the complexity of the integrated model may increase much over the optimal level. Moreover, such a complex model might be too empty, allowing ad hoc explanations of behaviour. This is especially true when one puts together assumptions that contradict one another.

We distinguished four types of additional assumptions about the characteristics of non-selfish motivations.

1. According to one assumption often adopted in theoretical works, there are non-outcome-oriented moral considerations in human preferences. This kind of approach has deep roots in sociological theory (Weber 1986 [1922]), and it has proponents among contemporary RCT researchers as well (Elster 1989). However, the empirical application of this approach raises several problems. First, the question of incorporation of non-outcome-oriented motivations into the classical utility-maximiser model has not yet been solved.[6] Second, if we build this kind of motivation into our empirical models, we must often consider the attitudes of the individuals involved. The evaluation of such subjective factors is more problematic than the measurement of economic consequences. Besides, the possibility of non-consequentialist ethics may be questioned even on a theoretical philosophical basis (Hausman and McPherson 1993: 705). RCT based large-scale data analyses almost never adopt this kind of motivational assumption.

2. The concept of altruism suggests that beside maximising their own welfare, individuals may be gaining utility from other people's welfare (Becker 1974; for further references: Hausman and McPherson, 1993: 687). Others' welfare basically refers to their material conditions. If it does not, a number of theoretical paradoxes might emerge (Elster 1989). This kind of additional motivational assumption can be built into RCT models. Moreover, testable implications can easily be derived from the

6 An interesting proposal for the solution can be found in Huoranszki (1999).

altruist model. A delicate question of model building is the selection of persons whose welfare is taken into account by the individual. There are relevant differences between the various altruism models depending on the specific research issues. In studies on family, the assumption of kinship altruism is adopted (Becker, 1974). The existence of this kind of altruism can be derived from evolutionary theories. In research on charitable behaviour the existence of altruism towards unknown others in society is often assumed (Hochman and Rodgers 1969). Mainly economists adopt the assumption of altruism. While the incorporation of this type of motivation into RCT models is easy and it is also popular, its empirical validity is often questioned (Andreoni 1990; Kahneman and Knetsch 1992; Sugden 1982; for critics based on laboratory experiments see: Rabin 1998: 17–18). The assumption of altruism towards unknown persons has been criticised most harshly.

3. Critics of the altruism assumption proposed an alternative hypothesis. They suggested that individuals can get utility from the act of contribution itself (Andreoni 1990; Kahneman and Knetsch 1992). This modification is partly a return to the non-consequentialist approach described above. However, this approach assumes that the contribution should improve other people's welfare. The warm-glow theory of giving can be tested easily. The welfare of beneficiaries (and the presence of other potential contributors) is not taken into account, although, the economic conditions of the contributing individual might have implications for warm glow giving. However, this type of explanation, where social action in a puzzling situation is derived directly from the desire to act in a particular way, can be criticised on metatheoretical grounds (Abell, 1992: 200.). Indeed, the assumption of the utility of contribution (giving, participation etc.) is somewhat naive. Nevertheless, this theoretical simplicity does not necessarily implicate empirical invalidity. Rather, it urges the researcher to examine the origin of preferences towards contribution. Another critique questions the assumption that goodwill alone motivates the preference towards others or towards charitative action.

4. This latter critique forms the basis of another theory of motivations. According to this hypothesis it is the relative position of the individual that matters. The incorporation of relative position into preferences may lead to status seeking (Frank 1985), or to conformity (Gould 1993; Bernheim 1994; Akerlof 1997). There is a complex model in sociological decision theory that takes into account both of these motivations (Lindenberg 1986; Lindenberg and Frei 1993). In this model individuals can gain utility from physical and social well-being. The latter has three determinant factors: status, confirmation, and affect. Although, the model is compact and elegant, it has practically no empirical applications.[7] Unlike the former assumptions, this type of extension requires the incorporation of non-material goods into the empirical analysis. Moreover, the researcher should have relatively detailed information about the social environment of the actors investigated. This might be one cause of the fact that the model is not prevalent in empirical RCT research.

One might add more types of motivational models to the list.[8] In empirical research with large-scale data analyses the assumption of altruism is the most

7 A recent example is the study of Nieboer (1998).

8 For example: theories about preferences towards fair distributions or about general fairness considerations (Rabin 1993; Binmore 1998; Bolton and Ockenfels 2000).

prevalent one. Additional non-selfish motivational factors are often missing from quantitative models. The future development of the evolutionary theory may foster the emergence of more general and widely accepted motivational assumptions. Moreover, the extension of the standard RCT model requires the critical evaluation of theories about human motivations in other social science paradigms.

PERCEPTION OF ALTERNATIVES

In order to conduct relevant empirical tests, one might want to know how actors see the constraints of their decision, and what kind of relationship exists between their subjective views and the observable variables of the situation. The formal modelling of the above mentioned relationship can provide fewer result than the exact analysis of motivations. However, the incorporation of this problem into RCT model building is inevitable. RCT research concerning the perception of alternatives have fairly moderate results. Researchers have explored the most important problems and discussed the issue in a way hardly testable in empirical models. The shortcomings of these theories are due to the basic characteristics of the RCT model. This model even in its basic form is open to the incorporation of a number of motivational assumptions. There is no way in the basic model, however, for the modelling of perception.

An alternative RCT model dealing with the problems of perception was developed in the science of economics (Simon, 1982),[9] but the bulk of research in this field was conducted by psychologists (for a survey see Rabin, 1998). The results of these investigations, however, are about the imperfectness of the basic RCT models. They are based on laboratory experiments that falsify certain assumptions of RCT models. Only few researchers have tried to provide alternative models that are testable formally and can be adopted in empirical models. Moreover, even the existing results of psychology are mostly neglected in empirical RCT-sociology research.

Probably the most important results are about the relationship between objective and subjective probability (Kahnemann and Tversky 1979). This and other results of prospect theory developed by Kahnemann and Tversky might be useful for empirical RCT research.

In RCT sociology Boudon and Lindenberg (Boudon 1989, 1996; Lindenberg 1989) investigated the ways perception can be incorporated into RCT models. Lindenberg built a concrete model that takes into account the framing effect. This model, however, is not widespread in empirical applications.

We cannot provide concrete suggestions for empirical research here but are merely concerned with the terminological framework. One basic notion is the term of subjective rationality (Boudon 1989; Abell 1992: 98). The definition of rational decision cannot be based on objectively existing constraints because this might lead to false implications about motivations and behaviour. In the framework of subjective rationality, the researcher evaluates the decisions taking into account the information available for the actors.

9 An example for the incorporation of bounded rationality models into analyses based on situational logic can be found in Langlois and Csontos (1993).

Another important term is bridge assumptions (Esser 1998; for other references see Kelle and Ludemann 1998). For the sake of testability, the empirical models should have a finite set of relevant variables for the decision process (Opp 1998: 207). Bridge assumptions provide such a finite set, connecting the measurable structural characteristics with individual perception (Esser 1998: 94–95). These bridge assumptions bring the RCT research closer to the subjective rationality model. The assumptions might concern three aspects of the decision making process: alternatives, decision constraints, and the evaluation of outcomes. The adoption of bridge assumptions makes it explicit that the researcher added ad hoc hypotheses to the general model. Mostly, these hypotheses come from other sociological paradigms.

One cannot deal with measurement problems caused by the perception of alternatives without significant modification in the basic RCT model. Different assumptions of other social science paradigms should be incorporated into RCT analyses. Moreover, the results of phenomenon-oriented empirical research also provide useful information for model building (Lindenberg 1998: 69). These empirical analyses may show what the subjectively relevant decision constraints of the actors are.

STATISTICAL METHODS

In the previous sections we examined how the results of RCT can be applied in empirical research. In the paragraphs below we show two statistical methods that might help to connect rational decision theories and large-scale data analysis.

A decision theoretic approach to regression models with a categorical dependent variable

Here we are concerned with the simplest type of models with a categorical dependent variable: the case of the dichotomous dependent variable. We will refer to this kind of models as a LOGIT-model. However this is only one of several possible types of regression models with dichotomous dependent variables. Regression techniques with qualitative dependent variables are especially important for social sciences. The outcomes to be explained might be the result of choices between certain discrete alternatives. In this case the model shows how likely the choice of an alternative is given certain values of the decision constraints:

$$P(y_i=1) = F(w) \quad (1)$$

where:

$$w = \beta_0 + \beta_1 x_{1i} + \ldots + b_m x_{mi} \quad (2)$$

where y_i is the outcome of individual i's choice (its value equals to 0 or 1), $x_{1i},\ldots,x_{mi}$ are the values of variables determining the individual's decision, and $\beta_1,\ldots,\beta_m$ are regression parameters. In the LOGIT-model the value of F(w) is a variable with a lognormal distribution.

The statistical textbooks often trace this model back to linear regression, and represent the qualitative dependent variable as a result of measurement problems. There is also a decision theoretic background behind the LOGIT-model. First, let us consider the utility of different outcomes, and its determining factors in a linear additive model:[10]

$$U_{iA} = \beta_0 + \beta_1 x_{1iA} + \ldots + \beta_m x_{miA} + \varepsilon_{iA} \quad (3)$$

where U_{iA} is the utility of alternative A for respondent i, x_{1iA} is the value of the first variable of importance for i if the respondent chooses A, and ε_{iA} is an error term. The relationship between the variables and the utility is expressed by the β parameters. Since there is an error term in the model, in this framework we interpret the utility of an outcome as a stochastic variable. The concept of stochastic utility has a theoretical foundation, thus this is not an *ad hoc* assumption (Amemiya 1981: 1490).

The values of certain variables are independent of the individual's decision. Other explanatory variables depend on the alternative chosen. This former type of variable is called choice dependent variable. In the linear additive model choice-dependent variables determine which alternative will be chosen.

For simplicity, let us assume that the actor has only two alternatives, A and B. Individual i prefers A over B if $U_{iA} > U_{iB}$. One can describe the probability of choosing A as follows:

$$P(U_{iA} > U_{iB}) = P\{\varepsilon_{iB} - \varepsilon_{iA} < \beta_1(x_{1iA} - x_{1iB}) + \ldots + \beta_m(x_{miA} - x_{miB})\} \quad (4)$$

If we assume that $\varepsilon_{iB} - \varepsilon_{iA}$ has a lognormal distribution, then the

$$F\{\beta_1(x_{1iA} - x_{1iB}) + \ldots + \beta_m(x_{miA} - x_{miB})\} \quad (5)$$

distribution function is a specific form of the LOGIT-model described in (1) and (2).

The relevance of this approach is that, unlike within the framework of the standard regression model, the statistical model can be derived directly from decision theory. The most important practical issue is the introduction of choice-dependent variables. These may have more than one value for each actor. They may vary among the alternatives. The adoption of this type of variable allows us to define concretely the individuals' decision constraints.

The models with choice dependent variables were used first of all in transport research, where the choice of commuting routes was to be explained (for references see Amemiya 1981: 1490–1491). In addition, one can also find examples for its application in research on public preferences about the welfare state (Heijden, Nelissen and Verbon 1997).

We used a simplified version of the model in (4) and (5). There are also traditional socio-economic variables which may be used in the models. Besides, in the empirical models the value of the constant term is not the same for the different alternatives.

This approach is more elegant from the point of view of decision theory. However, model building in this case requires more information. Nevertheless, the conventional LOGIT-model could also be adopted in RCT research.

10 The description follows the one in Amemiya (1981).

Measuring non-selfish considerations with the help of a residual technique

We noted earlier that researchers face special difficulties when trying to analyse the impact of motivations that cannot be connected to the actors' economic conditions. Here we describe the elements of a possible solution. However, we concede that at this point, this method is far from fully satisfactory.

According to the starting point of the method there are two basic motivational forces behind an individual's decision. The first is economic self-interest, the other is some kind of moral consideration. The concrete content of this latter motivation depends on the situation investigated and the researchers' assumptions. As we assumed, the moral motivational force cannot be measured directly. In this case the theoretical and empirical models of the relationships between the variables can be described as follows (in its simplest form):[11]

$$\text{The theoretical:} \quad y_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \varepsilon_e \tag{6}$$

$$\text{the empirical:} \quad y_i = \hat{\beta}_0 + \hat{\beta}_1 x_{1i} + \hat{\varepsilon}_m \tag{7}$$

where y_i is the value of the dependent variable for individual i, the variable x_1 represents economic self interest, x_2 is the variable for moral considerations. ε_e and $\hat{\varepsilon}_m$ are error terms, where $\hat{\varepsilon}_m = \beta_2 x_2 + \varepsilon_e$.

In order to make the moral considerations measurable, we should find another dependent variable influenced by the same explanatory factors (selfish and non-selfish) as the original Y variable. First we test the model with the "other" dependent variable. According to our assumptions, the error term (among other things) may depend on the moral considerations we are looking for. Then we can add this error term to the explanatory model of Y. Thus we can measure the impact of moral considerations, at least in an approximate way.

The method is especially useful when we intend to analyse the value of certain actions. In general, this can be used in cases when the variables available do not cover the whole set of decision constraints. This method was applied in political science where it was used for explaining the voting behaviour of citizens or representatives (Carson and Oppenheimer 1984; Holmes 1990).

The misspecification of regression models can lead to a faulty interpretation of the results. The residual method is especially sensitive to specification problems. In the framework of the standard regression techniques one can avoid false inferences using the most common testing strategy, because misspecification increases the probability of insignificant results. In the method described above, instead, the misspecification may easily lead to the (sometimes false) conclusion that our assumptions about moral considerations are correct.

11 The description of the method is very simplified here. A more sophisticated discussion can be found in Carson and Oppenheimer (1984).

CONCLUSION

Proponents of RCT are convinced that the paradigm may have an important role in the unification of sociological theory and empirical research (Hedström and Swedberg 1998: 70). However, at the present state of the theory, the connection between sociological RCT theory and empirical research is imperfect. Numerous problems may arise during the empirical application of theoretical models. It can be seen that the success of economics in quantitative empirical research cannot be replicated in the field of sociology. The shortcomings of empirical applications are targeted by the critics of the paradigm (Green and Shapiro 1994:10). They claim that RCT research cannot provide more than a re-explanation of well known facts in a new terminology (Green and Shapiro 1994: 6). Nevertheless, RCT researchers point to the fact that the re-explication of old theories is only the first step towards the development of a new paradigm (Lindenberg 1998: 58). One cannot jump to conclusions about the future perspectives of a theory in this early phase. The adoption of formal models and the individualist approach are favorable for empirical research. At the same time, the existence of subjective decision-making factors makes model building more difficult. In our opinion the opportunities provided by sociological RCT are more promising than one might think based on the existing empirical research.

REFERENCES

Abell, P. (1991): Introduction. In: Abell, P. (ed.) *Rational Choice Theory.* Aldershot, Brookfield: Edward Elgar, ix–xviii.

Abell, P. (1992): Is Rational Choice Theory a Rational Choice of Theory? In Coleman, J. and Fararo, Th. (eds.): *Rational Choice Theory: Advocacy and Critique.* Newbury Park: Sage, 183–206.

Akerlof, G. (1997): Social distance and social decisions. *Econometrica,* 65: 1005–1027.

Amemiya, T. (1981), Qualitative response models: a survey. *Journal of Economic Literature,* 19: 1483–1536.

Andreoni, J. (1990): Impure altruism and donations to public goods: a theory of warm-glow giving? *Economic Journal,* 100: 464–477.

Baron, J. and Hannan, M. (1994), The impact of economics on contemporary sociology. *Journal of Economic Literature,* 32: 1111–1146.

Becker, G. (1974): A theory of social interactions. *Journal of Political Economy,* 82: 1063–1093.

Bernheim, D. (1994): A theory of conformity. *Journal of Political Economy,* 102: 841–877.

Binmore, K. (1998): The evolution of fairness norms. *Rationality and Society,* 10: 275–301.

Blossfeld, H.-P. and Prein, G. eds. (1998a): *Rational Choice Theory and Large-Scale Data Analysis.* San Francisco–Oxford: Westview Press–Boulder.

Blossfeld, H.-P. and Prein, G. (1998b): The Relationship Between Rational Choice Theory and Large-Scale Data Analysis – Past Developments and Future Perspectives. In *Blossfeld–Prein* 1998a: 3–27.

Bolton, G. and Ockenfels, A. (2000): ERC: a theory of equity, reciprocity and competition. *The American Economic Review,* 90: 166–193.

Boudon, R. (1989): Subjective rationality and the explanation of social behavior. *Rationality and Society,* 1: 173–196.

Boudon, R. (1996): "The cognitivist model": a generalized "rational choice model". *Rationality and Society,* 8: 123–150.

Carson, R. and Oppenheimer, J. (1984): A method of estimating the personal ideology of political representatives. *American Political Science Review,* 78: 163–178.

Csontos, L. (1996): Túl jón és rosszon: a racionális döntések elméletének recepciója Magyarországon (Over good and bad: reception of rational choice theory in Hungary). *Közgazdasági Szemle,* 43: 326–331.

Elster, J. (1989): *The Cement of Society: A Study of Social Order.* Cambridge: Cambridge University Press.

Esser, H, (1998): Why are Bridge Hypotheses Necessary? In *Blossfeld–Prein* 1998a: 94–111.

Frank, R. (1985): *Choosing the Right Pond: Human Behavior and the Quest for Social Status.* Oxford–New York: Oxford University Press.

Frei, B. and Eichenberger, R. (1989): Should social scientists care about choice anomalies? *Rationality and Society,* 1: 101–122.

Friedman, D. and Hechter, M. (1988): The contribution of rational choice theory to macrosociological research. *Sociological Theory,* 6: 201–218.

Goldthorpe, J. (1998): The Quantitative Analysis of Large-Scle Data-Sets and Rational Action Theory: For a Sociological Alliance. In *Blossfeld–Prein* 1998a: 31–53.

Gould, R. (1993): Collective action and network structure. *American Sociological Review,* 58: 182–196.

Green, D. and Shapiro, I. (1994): *Pathologies of Rational Choice Theory.* New Haven–London: Yale University Press.

Harsányi, J. (1969): Rational choice models of political behavior vs. funcionalist and conformist theories. *World Politics,* 21: 513–538.

Harsányi, J. (1976): Advances in Understanding Rational Behavior. In Harsányi: *Essays on Ethics, Social Behavior, and Scientific Explanation.* Dordrecht: Reidel, 89–117.

Hausman, D. and McPherson, M. (1993): Taking ethics seriously: economics and contemporary moral philosophy. *Journal of Economic Literature,* 31: 671–731.

Hechter, M. (1994): The role of values in rational choice theory. *Rationality and Society,* 6: 318–333.

Hechter, M. and Kanazawa, S. (1997): Sociological rational choice theory. *Annual Review of Sociology,* 23: 191–214.

Hedström, P. and Swedberg, R. (1998): Rational Choice, Situational Analysis, and Empirical Research. In *Blossfeld–Prein* 1998a: 70–87.

Heijden, van der, E., Nelissen, J. and Verbon, H. (1997): Altruism and fairness in a public pension system. *Journal of Economic Behavior and Organization,* 32: 505–518.

Hochman, H. and Rodgers, J. (1969), Pareto optimal redistribution. *American Economic Review,* 59: 542–557.

Holmes, Th. (1990): Self interest, altruism, and health risk reduction: an economic analysis of voting behavior. *Land Economics,* 66: 140–149.

Huoranszki F. (1999): Döntéselmélet és erkölcsi normák (Decision theory and moral norms). *Szociológiai Szemle,* (1): 3–30.

Kahneman, D. and Tversky, A. (1979): Prospect theory: an analysis of decision under risk. *Econometrica,* 47: 263–291.

Kahneman, D. and Knetsch, J. (1992): Valuing public goods: the purchase of moral satisfaction. *Journal of Environmental Economics and Management,* 22: 57–70.

Kelle, U. and Lüdemann, Ch. (1998): Bridge Assumptions in Rational Choice Theory: Methodological Problems and Possible Solutions. In *Blossfeld–Prein* 1998a: 112–125.

Langlois, R. and Csontos, L. (1993): Optimization, Rule-Following, and the Methodology of Situational Analysis. In Maki, U., Gustafsson, B. and Knudsen, Ch. (eds.): *Rationality, Institutions and Economic Methodology.* London–New York: Routlege, 113–132.

Lindenberg, S. (1986): The Paradox of Privatization in Consumption. In Diekmann, A. and Mitter, P. (eds.): *Paradoxical Effect of Social Behavior: Essays in Honor of Anatol Rapoport.* Heidelberg: Physica.

Lindenberg, S. (1989): Choice and Culture: The Behaviorial Basis of Cultural Impact on Transaction. In Haferkamp, H. (ed.): *Social Structure and Culture.* Berlin De Gruyter, 175–200.

Lindenberg, S. (1992): The Method of Decreasing Abstraction. In Coleman, J. and Fararo, Th. (eds.): *Rational Choice Theory: Advocacy and Critique.* Newbury Park: Sage, 3–20.

Lindenberg, S. (1998): The Influence of Simplification on Explananda: Phenomenon-Centered Versus Choice-Centered Theories in the Social Sciences. In *Blossfeld–Prein* 1998a: 54–69.

Lindenberg, S. and Frey, B. (1993): Alternatives, frames, and relative prices: a broader view of rational choice theory. *Acta Sociologica,* 36: 191–205.

Marwell, G., Oliver, P. and Prahl, R. (1988): Social networks and collective action: a theory of critical mass III. *American Journal of Sociology,* 94: 502–534.

Miller, G. (1997): The impact of economics on contemporary political science. *Journal of Economic Literature,* 35: 1173–1204.

Nieboer, A.-P. (1998): *Life Events and Well-Being: A Prospective Study on Changes in Well-Being of Elderly People Due to a Serious Illness Event or Death of the Spouse.* Manuscript. Groningen: Rijksuniversiteit.

Opp, K.-D. (1998): Can and Should Rational Choice Theory Be Tested by Survey Research? The Example of Explaining Collective Political Action. In *Blossfeld–Prein* 1998a: 204–230.

Orthmayr, I. (1997): Módszertani Individualizmus (Methodological individualism). *Szociológiai Szemle* (2): 3–32.

Rabin, M. (1993): Incorporating fairness into game theory and economics. *The American Economic Review,* 83: 1281–1302.

Rabin, M. (1998): Psychology and economics. *Journal of Economic Literature,* 36: 11–46.

Simon, H. (1982): *A korlátozott racionalitás* (The limited rationality). Budapest: KJK.

Sugden, R. (1982): On the economics of philantropy. *Economic Journal,* 92: 341–350.

Szántó, Z. (1992): A racionális döntések elmélete és a pozitív társadalomkutatás. Hozzászólás Róna Tas Ákos "A racionális döntések elmélete a szociológiában"című cikkéhez (Rational choice theory and the positive research of society. Comment on Ákos Róna Tas: "Rational choice theory in sociology"). *Replika* (4): 116–118.

Szántó, Z. (1998a): A makroszociológia mikroalapjairól. Gondolatok Tardos Róbert "Szociológiai válaszkísérletek a mikro-makro problémára" című tanulmánya kapcsán (Micro bases of macro-sociology. Thoughts on Róbert Tardos: "Attepmt to answer sociologically on the macro-micro problem"). *Szociológiai Szemle,* (2) 89–108.

Szántó, Z. (1998b): A racionális döntések elméletén nyugvó társadalomtudomány (Social science based upon rational choice theory). In Csontos, L. (ed.): *A racionális döntések elmélete.* Budapest: Osiris–Láthatatlan Kollégium.

Tardos, R. (1998): Szociológiai válaszkísérletek a mikro-makro problémára (Attepmt to answer sociologically on the macro-micro problem). *Szociológiai Szemle,* (1): 3–22.

Weber, M. (1986 [1922]): *Gazdaság és társadalom* (Economy and society). Budapest: KJK.

Zafirovski, M. (1999): What is really rational choice? *Current Sociology,* 47: 47–132.