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BOOKS

THE NEW SOCIAL SCIENCE

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Szántó Zoltán: *Analitikus szemléletmódok a modern társadolomtudományban.* [Analytical Theories in the Modern Social Sciences.] Budapest: Helikon, 2006.

Szántó Zoltan and his collaborators, Orban Annamária and Tóth István György deserve the thanks of Hungarian social scientists for collecting into a short, concise volume their essays describing and explaining the accomplishments of the creative innovators who have fundamentally transformed and unified the social sciences in the past four decades. It includes broadly Gary Becker, Albert Hirschman, Mancur Olson, Douglass North, Robert Axelrod, James Coleman and a cast of supporting actors such as Peter Blau, George Homans, Mark Granovetter, Ronald Burt, to mention but a few from a longer list that I refer to as the "new social science". The fields pioneered by these intellectuals have diverse names: game theory, new political economy, theory of collective action, social capital theory, network theory, rational choice, and new institutional economics yet they all share some common features. They cut across disciplinary boundaries and cumulatively provide a foundation for a unified social science. Their strategy for theorizing is methodological individualism. Human actor's choices occupy a central place. Group behavior, norms, institutions, ideologies and other supra-individual structures and collective action are explained or can be explained by means of these two fundamental principles. As a useful simplification, when collective entities like states, organizations, political parties, etc., act in a unitary manner, they are treated as actors who make choices. If they are not unitary, the choices they make are analyzed as the result of the dynamics of factions, leadership groups, and other components of the collective entity. Rational choice as a method does not assume rationality from an external observer's view point, but from the subjective perspective of the actor. Thus the choice of becoming a suicide bomber is viewed in terms of the benefits and costs of the bomber, i.e. ideological indoctrination, peer pressure, loyalty to a cause, belief in martyrdom. Non-rational behavior in the case of the suicide bomber would be if he activates the bomb in a deserted location rather than in a crowd, or detonates the bomb among allies rather than enemies.

The new social science goes a long way to realizing the intellectual program of the Enlightenment and, closer to us, of Max Weber's vision for a unified social and

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cultural science. Weber, it will be recalled, wrote his monumental *Wirtschaft und Gesellschaft* for a larger collection titled "Grundriss der Sozialwissenschaften", and he was for many years the editor of the journal Archiv fur Sozialwissenschaft und Sozialpolitik. Weber was a methodological individualist, which he explained in several of his methodological essays, e.g., "…interpretive sociology [verstehende Soziologie] views the concept of individual action as its fundamental building bloc, as its atom…concepts like state, association, feudalism, and similar concepts and categories for specific interactions and…have to be reduced [analytically] to the actions of individual persons in these institutions" [Weber, M.: Soziologie, Analysen, Politik. Stuttgart, 1956:110]. Weber also warned against "the great misunderstanding that an 'individualist' method implies valuating 'individualism' over social values, and the mistaken notion that the inevitable rationalist character of concept formation implies that rational motives predominate in human action" [Weber, M.: *Wirtschaft und Gesellschaft.* Tubingen Mohr, 1956, volume 1:9]. These points are important to underline because such criticisms have been and keep being mistakenly made by critics of the new social science as well, despite Weber's objections and despite explicit statements to the contrary by the new social scientists.

In chapter 1, Szántó presents an overview and typologies of how the various pieces of the new social science jigsaw puzzle fit into a comprehensive theoretical whole. In particular, the strength of these theories is that they explain macro behavior and structures from micro level choices, and correspondingly, the macro structures and institutions change the benefits and costs of decision-makers at the micro level. The conclusions of these analyses are frequently counterintuitive, i.e. they explain why individuals in groups or other supra individual entities choose behaviors that they know in the long run are harmful to all, e.g. environmental degradations explained by the Tragedy of the Commons, an example of the prisoner's dilemma. Thomas Schelling demonstrates that in a population divided into two groups, if both have a slight preference of living in a neighborhood where they are 50% or more (they do not want to be in a minority in their neighborhood, but they are quite tolerant of some diversity), over time their district will become completely segregated, even though each resident would actually prefer to live in mixed neighborhoods (so long as they are in the majority) and even though they harbor no enmity towards the other group (they only have a slight in-group preference). To go from the macro to the micro, using Schelling, the model results show that even if a few householders have different preference (they do not mind being a minority), the segregation structure will not change. There are policy consequences from such a result: only a social policy can stabilize mixed neighborhoods before the district becomes segregated. Obviously Schelling made some assumptions about the price of homes, the income of the movers, and the vacancy and occupancy process, but these are close enough to conditions one finds in many urban districts in the U.S. The model would apply equally to populations that live in apartments rather than houses.

The Schelling example also illustrates a strength of the new social science: its explanations rest on actual mechanisms (e.g., that underlie residential mixing and segregation) which spell out cause and effect and can be empirically tested, in contrast

to much theorizing in sociology which is an elaborate conceptual scheme and descriptive of a state of affairs. Because the mechanism is explicit, there are clear-cut implications for social policy. The varieties of explanation in the new social science are analyzed by Szántó and summarized in *Table 1* on page 25. Other chapters deal with exchange theory, game theory, the new political economy, collective action, class analysis, rational choice, social capital and networks. The chapters are short, provide a brief biographic and intellectual sketch of the principal theorists, and are full of examples and references for further study. Rather than repeat what Szántó writes, I will demonstrate how these theories can be applied singly and jointly for shedding light on some sociological topics. I will indicate in parentheses the theorists and chapters in the Szántó book who enter into the examples I discuss.

Start with the general question of why customs and traditions, accepted modes of behavior, beliefs, and attitudes tend to persist. Max Weber wrote that the "stability of custom rests on the fact that those who do not conform …suffer disadvantages …as long as the majority of people in their environment expects conformity to custom and counts on it [Weber, M.: Wirtschaft und Gesellschaft. Tubingen Mohr, 1956, volume 1:16]. Trying to explain the persistence of racial segregation in the U.S. before the civil rights laws of the 1960s, James Coleman expressed the Weberian insight (without actually knowing that Weber had had such an insight) in the language of game theory and put forward an "innovator loss" model, an application of the well-known prisoner's dilemma (PD) paradigm, in which one of the players is a single person and the other player is the group he belongs to. The group rewards conformity and punishes non-conformists. The "innovator/non-conformist" gets punished every time she does not conform, and that is true for every member of the group acting alone. Thus all change attempts are costly, and the innovators get discouraged or repressed. Change can only come about when the group as a whole changes. Hence the stability of segregation. The policy implications are clear: to change the majority behavior in the group, there have to be laws outlawing segregation and they have to be enforced. Coleman's conclusion is in agreement with Schelling.

Interestingly, Axelrod's theory of cooperation (Part 4) based on simulations of large populations of persons interacting in pairs with a PD payoff reaches the same conclusion. The most robust and successful strategy is Tit For Tat: in this application TFT rewards conformity and punishes non-conformity, and in the aggregate the TFT conformists (segregationists) do better than the innovators who want to change race relations. Nevertheless, Axelrod also demonstrates that if the non-conformists form a cluster, i.e. they interact with one another more frequently than with outsiders; then the change in behavior can take root and persist in subsets of the population without dying out. But where does a cluster come from? Here is where network theory (Part 4) can be brought into the explanation. If groups congregate on the basis of belief, or language, or any other attribute(s), as religious sects do, and members have an in-group preference for choosing interaction partners, as is usually the case, then non-conformist behavior, beliefs, attitudes can take root and persist. There are other mechanisms that explain clustering. The baby boom generation that came of age in the

mid 1960s radically changed the sexual mores, as well as other dimensions, of the conventional adult culture. In the span of a few years, the ratio of adult guardians of the inherited culture to youth decreased dramatically; moreover youth congregate in institutions like schools and universities and form peer groups with strong bonds. As well, a higher proportion of youth attended these institutions where they clustered. This is how favorable conditions for the clustering of youths and thus also for the spread of counter-culture, as predicted in the Coleman and Axelrod models, were established rapidly. The counter-culture became widespread and self-sustaining.

So far, the interactions were all interpersonal, and there were no institutions such as the state, police, prosecutors, and laws, designed to stop non-conformists through social control, as one would assume for non-conforming political behavior in an authoritarian regime or under communism. Can the new science models incorporate institutions, and how does it do that? The work of Mancur Olson on collective action (Part 3), of Albert Hirschman on citizen and consumer responses to unsatisfactory organizations (Part 3), and of Douglass North on the new institutional economics (Part 3) can serve as models for sociologists. The basic notion on social control actually derives from the Becker rational choice tradition (Part 2) which assumes that if the cost of a behavior is increased compared to alternatives, and benefits remain constant, the behavior will be chosen less, i.e. repression is effective. However, as students of political sociology and of social movements have shown, that is only 50% of the story. Repression seldom targets only the political deviants; it catches lots of people in a wide net who have committed no offense. Thus within an initially uncommitted bystander public many experience the repression as unjust and excessive, and regime change becomes a more desirable goal for them as a result of repression. Some become active opponents (in Becker's model they expect more benefits from an overthrow of the regime than previously). This indirect and unexpected consequence of repression creates the "paradox of repression": although some opponents become inactive because of the rising cost of repression, other neutral bystanders join the opposition because the benefit of regime change increases. Both mechanisms exist simultaneously. The theory does not predict which mechanism is stronger without additional empirical input, but that is true also for laws in the physical sciences where predictions depend on initial conditions and empirical coefficients and parameters.

An appropriate pair of examples for the coercion paradox is the February 1917 anti-Tsarist demonstrations in St. Petersburg that started with women demanding bread and escalated to strikes and anti-war demonstrations and troop mutinies despite police and military repression, and eventually ended with the fall of the Tsarist regime. In contrast, during the far greater famine of 1921, when food rations were cut in February in Petrograd by the Bolshevik government, workers responded with strikes and demonstrations and the Kronstadt sailors revolted and formed a Provisional Revolutionary Committee. The bulk of the population, unlike in 1917, remained disengaged and the Red Army mercilessly repressed the revolt. In both cases, in the same city, there is hunger, initial protests grow larger, some soldiers revolt, the regimes are in a crisis due to war or civil war and are unpopular with much of the

public, yet the outcome of repression is opposite, hence the paradox. To me these contrasting cases demonstrate how the new social science theories and models presented in Szántó's book have to be combined with a great deal of empirical work for their full power and potential to be realized, i.e. to resolve the paradox. But they are powerful if properly formulated and used.

To continue with the example of popular uprisings against an authoritarian regime, Olson's theory of collective action (Part 3) predicts that it is not likely to happen because in large populations a collective good will is not to be provided voluntarily and because no organizational means of mobilizing opponents is allowed to exist in a police state. Olson's theory is, however, based on assumptions that simplify the motivations and situation in many mass protests which typically grow from small to larger (called a bandwagon effect), with participants and bystanders revising their expected benefits and costs depending on the size and growth of the protesting crowds, as was true in Leipzig and East Germany in 1989 and in Prague a few weeks later. I have modeled these bandwagon effects as an extension of Olson's baseline theory ("Opportunities and framing in the Eastern European revolts of 1989" in McAdam, D., McCarthy, J. and Zald, M. eds.: *Comparative Perspectives on Social Movements.* Cambridge University Press, 1996). In terms of the Becker rational choice approach, a bandwagon is produced when the benefits of participation increase with the number of participants (probability of success increases in the estimation of the participants), and the costs decrease (there is safety in numbers).

Here I want to focus on the second issue of how to explain the formation of large crowds of protesters in the absence of a preexisting leadership and organization. The reason this is an interesting topic is that it illustrates how political culture and culture more broadly, can be introduced into rational choice modeling: culture becomes a substitute for an organization mechanism, a development that Olson simply did not consider but is not in contradiction with his fundamental insight. In short, for the new social science, culture provides signals by means of which expectations in large populations are coordinated and actions converge spontaneously without central leadership and organization.

Start with a well-known experiment that Schelling did with his students. Two New Yorkers have to meet somewhere in New York (a city of over 20 million people), they can not communicate with one another, what location do they pick? The vast majority of students picked Times Square! In the absence of any other information, and knowing the history, geography, and culture of New York, Times Square is an obvious choice. Times Square is a cultural signal shared by New Yorkers, and enables coordination without communication among strangers. Note that if one has more information about the other person, e.g. he is your best friend, the coordination problem becomes more difficult because there are more potential signals. We could meet at his apartment, at my apartment, at his work place, in our favorite bar, where we saw each other last, etc. In fact, the larger the group, and the more anonymous, the more obvious the signal is and the easier coordination without central organization.

Political crowds who share a political culture will gather at historic places where great national political events have taken place in the past, e.g. Wenceslav Square in Prague, Tiananmen Square in Beijing. A banned political culture lives on in the private lives of people and can become activated suddenly with cultural signaling. A hidden majority then discovers that it is the majority! Combine signaling with the bandwagon effect and you can explain how small protests grow into the hundreds of thousands.

Note that the starting point for these theories and models was Weber's explanation for the stability of custom and Coleman's formulation of the same basic idea in terms of an "innovator-loss" game, which is a variant of the PD. By adding elements from other theories from Szántó's book, one ends up with opposition movements in authoritarian regimes. Some additions derive from network theory, others from organizational analysis, from institutions, and from culture. What the new social science provides are building blocs that can be assembled for modeling and explaining a wide slice of human behavior, social structure and institutions.

There is a whole class of behaviors whose starting point is not "innovator-loss" but its opposite, "innovator-gain", for instance innovation in economic behavior that Schumpeter referred to as the essence of entrepreneurship. Many competitive processes have the property that innovation and change, rather than stability and conformity to the status quo, are rewarded with more profit, prestige and rank: fashion, sports, competition for political office, all examples of "positional goods". In these cases, e.g. competition for an Olympic medal, unlike the Becker rational choice model for goods and services with diminishing marginal utility (the more one has, the less one desires more of it, compared to other goods and services), the more one has or the higher one's rank, the more one wants or one strives for an even higher rank. Because of competition, one has to incur more costs (more time in training in the sport), the closer one gets to the top ranks. Another class of behaviors and institutions have positive sum properties for the participants (and are not a PD, expressed in game theory terminology), that is everybody is better off converging and conforming to the same behavior. Conventions such as driving on the right side of the street, an alphabet, a currency, languages, computer languages, etc. fall into the category of positive sum games. Some of these conventions serve only instrumental goals (traffic laws), but others like language have group identity conferring properties. The building blocs that are discussed in Szántó's volume and which I used earlier can also be used for explaining, for instance, what happens when alternative conventions compete for supremacy. In my view, the most profitable way of studying and of understanding the new social science is to apply it to a substantive issue.

On the frontiers of the new social science, which awaits lots more work from sociologists, are topics like the production of moral virtues and other collective goods (workmanship, honesty, truthfulness, etc.) we associate with culture, what problems result for a population and society when these diminish, the production and persistence of non-rational beliefs (e.g. some political and religious beliefs) and the consequences (positive and negative) of these beliefs, a topic that Weber a hundred years ago already

investigated in his *Protestant Ethic and the Spirit of Capitalism.* These topics can be conceptualized within the framework of social capital theory which is covered in Part 4 of the volume under review.

To sum up, the reader will find a clear and comprehensive introduction to the theorists and models – I call them building blocs – developed within the framework of the new social science in the Szántó volume, which accomplishes its goal in two hundred pages and at a bargain prize. We should be thankful to the author for opening a window to an exciting intellectual journey that is in full swing in all the social sciences and that one hopes, some readers will join after reading the book.