

COMMITTEE IV
A Critical Assessment of
the Achievements of the
Economic Approach

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COMMENT ON COLEMAN: CRUMBS FROM RICH MEN'S TABLES

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DISCUSSION PAPER

on

James S. Coleman's

THE ECONOMIC APPROACH TO SOCIOLOGY

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Comment on: James Coleman "The Economic Approach to Sociology"

1. Crumbs from Rich Men's Tables

In his latest work James Coleman (see e.g. Coleman, 1984) is on very economic terms with economics; in a very personal kind of exchange process across the borderlines of academic disciplines he is to be found on the demand side for economic methods as well as on the side of those who supply economics with fresh ideas. And, as economists would predict, this exchange is to the mutual benefit of both sides.

In my opinion Coleman's suggestion to treat the problem of aggregation, the "micro-macro-transition" in his words, in a less abstract way can be expected to increase the explanatory power of economic theory considerably.

On the other hand an application of the economic rational action approach to sociological problems seems to produce results often completely unexpected and highly amazing. As Coleman convincingly argues in his paper, panics can be explained as the collective outcome of rational individual reactions to sudden situations of danger. This explanation stands in sharp contrast to the folk interpretation of panics as outbursts of the irrational.

Obviously both, economics and sociology, can to their advantage feed, at least to some extent, on the crumbs that fall from the rich man's table. And maybe in these days, when the rich in

knowledge eat such specialized food at such separate tables, only those who eat the crumbs have a good chance of a balanced diet. As I am in basic agreement with Coleman's approach as well as with his results, no fundamental criticism is to follow. Rather, I wish to add bits and pieces to his ideas. Consequently very few question-marks, a couple of colons, and some exclamation points are to be found in my text.

2. Games People Play

The relation between individual behaviour and aggregate outcome seems to be more complicated than many economic models assume and to be mined with possible fallacies of composition and division. If we classify the collective outcomes of the interaction of individual agents by their desirability and predictability from the point of view of the individuals, four possible cases can be distinguished.

Aggregate outcome is:

	Desired	Undesired
Expected	1. Deliberate organization	3. Suboptimal situation
Unexpected	2. "Invisible hand"-situation	4. Counterfinal situation

Each of these cases can be frequently observed in the real world, though social scientists, and notably economists, allocate their interest in these cases in a somewhat asymmetrical way.

James Coleman himself has contributed much to our understanding of the first case with his individualistic "combining resources model" of corporate actors (Coleman, 1974), and I do not wish to comment on that.

For obvious reasons I called the second case "invisible hand"-situation. Economics had some of its triumphs in the analysis of situations of this kind. Under certain conditions, specified by the theory of general economic equilibrium, individual actions lead to an aggregate outcome, which is desired and unintended at the same time by the economic agents. Among the conditions, under which this transition from micro-equilibria to macro-equilibrium holds, are some critical ones such as fully specified private property rights and the absence of externalities.

Unfortunately, there is no universal teleology, relating individual actions to exclusively desired collective results.

James Coleman in his paper draws our attention to one subclass of situations, in which individuals find themselves in a structure of incentives, such that individually rational action ends in a collective result that is undesirable to all: panics, littered sidewalks, arms' races, overgrazed commons, extinction of buffaloes and of whales.

I labelled this third case "suboptimality" to indicate that the aggregate result to be expected is inferior to a different outcome that could have been attained as well, had only the agents behaved differently.

The examples given in Coleman's paper share as a common feature in the logical structure of prisoners' dilemma. Coleman convincingly argues that, given certain conditions, compliance with social norms can stabilize a collective outcome of interactive individual behaviour which is Pareto-superior, though a disequilibrium in the original prisoners' dilemma setting. Dr. Pangloss, who nowadays would safely take residence in Chicago, would have been pleased to learn this result: the "best of all possible worlds" seems to be within reach, even if somewhat indirectly.

But the total class of situations of suboptimality seems to be much wider, and prisoners' dilemma a special case, although a rather frequent one in the real world.

Even in the simplest of all imaginable worlds of interacting agents, the world of two persons who choose between two strategies each, 78 (non-equivalent) distinct games can be classified with reference to the possible constellations of individual (ordinal and strict) preference orderings (see A. Rapoport, M. Guyer 1966). If one groups these games along an axis with an increasing degree of conflict between the players, you have no-conflict or pure coordination games with a unique, stable and Pareto-optimal equilibrium on the one end of the axis and pure conflict (zero sum) games on the other extreme.

Whereas in pure coordination games no norms are required to achieve a desired aggregate outcome, in zero sum-situations norms clearly are not enforcible. Between these extremes, one finds games with varying mixing ratios of conflict and cooperative elements, one of which is prisoners' dilemma. Some of these games are "negotiable games" (A. Rapoport, 1964, p. 63) in the sense

that agreements or norms to diverge from their respective maximin-strategies can lead to a higher payoff to both players.

I rather arbitrarily pick out a few examples of negotiable games with an increasing element of conflict involved.

Suppose Robinson Crusoe and Friday intend to meet for hunting somewhere on their island, and two possible meeting-places are available, the bay (B) or the mountain top (T), neither of which is preferred by any of them. In this situation they are in need of some convention or norm, say,

		Friday	
		B	T
Robinson	B	10	0
	T	0	10

to meet at the bay under all circumstances, to avoid the danger of missing each other.

By the way, Thomas Schelling's notion of a focal point seems to be identical to a tacit convention of this kind.

If a husband and his wife want to spend a pleasant evening together but have opposing preferences as to either go out for dinner (D) or to a Broadway show (S), they would be well advised

to agree on some rule to come to a decision: to throw a coin for instance, or to decide by turns on repeating occasions.

		Wife	
		D	S
Husband	D	10	0
	S	0	5
		5	0
		0	10

Let Jack and Jill have a quarrel, which both of them had rather be settled. The one who first gives in and apologizes (A) is better off than before, but not as well off as he or she might have been, had the other taken the initiative.

		Jill	
		A	Not A
Jack	A	5	10
	Not A	15	0
		5	15
		10	0

Thus, although it is in each player's interest to apologize, it is to his greater advantage to have the other player apologize first. To come to a solution, one and only one of the two has to act according to the benevolent rule to benefit both, even if the other benefits more than he himself. Without such a rule both might go on waiting for the other to give in and remain in quarrel.

Although Anatol Rapoport (Rapoport, 1974, p. 33), who ought to know, warns us not to assume too readily an isomorphism between game situations, that have very restrictive premises, and real life situations, some cautious observations suggest themselves with regard to these few examples:

- (a) There are rather different social situations with varying cooperative elements, in which norms can be expected to advance efficient aggregate outcomes. According to the particular situation the kinds of norms needed will differ considerably.
- (b) The effectiveness of a given norm will not always increase with the proportion of a given group to adhere to it, as it always is the case in prisoners' dilemma.
- (c) Biological evolution has provided physically very different, though functionally equivalent solutions to the problem of living organisms to perceive the world visually. Quite similarly, equivalent norms have evolved for comparable social situations: depending on the country you happen to stay in, eating noisily can be either regarded as rude behaviour or as a particular politeness to your hostess.

Thus, while it seems safe to predict that every society will comply with a set of norms, it seems to be impossible to know what these norms will be.

- (d) Positive transaction costs may represent an insurmountable obstacle to the transition from a given norm to a more efficient one, which may come to be known subsequently. Paul David (David, 1985) in a very witty article has shown that the conventional arrangement of letters on typewriter and computer keyboards has not been substituted for a more efficient one because, among other things, huge depreciations on human capital and technical equipment would have been involved.
- (e) Another point is worth mentioning in my view. James Coleman holds in his paper that demand for a norm arises, whenever the internalization of externalities is impossible by means of the market. But an effective norm, which meets such a demand, may induce novel externalities. If, in the original prisoners' dilemma situation, the prisoners comply with the code of honour of their guild never to plead guilty, they can expect an unduly mild punishment, which is against the interest of the rest of the society. The same is true for the members of a cartel, who cooperate to the detriment of the consumers. To a large extent antitrust legislation can be interpreted as an attempt to obviate the emergence of cooperation norms.

I called a situation counterfinal in my classification, in which rational individual actions lead to an aggregate result that is undesired as well as unexpected. This can happen, if actors mis-

conceive their situation or if they lack the knowledge to correctly predict the overall consequences of their interactions. Take Thomas Schelling's (Schelling, 1971) famous thought experiment as an example.

Very often the segregation of ethnic groups is thought of as a consequence of the bad taste of some majority for discrimination. In his thought experiment, Thomas Schelling gives a different potential explanation of phenomena of segregation: Imagine you put up to 32 pennies and up to 32 dimes at random on a board of checkers. Now assume that every dime wants at least half of its neighbours on the surrounding eight fields to be dimes, and every penny wants a third of its neighbours to be pennies. One could rightly call the coins' preferences for their neighbourhood non-discriminatory.

Now shift the coins randomly until the neighbourhood preferences of every coin are met. The result will be a sharp segregation of pennies and dimes into two or very few homogeneous groups.

As a counterfactual result the average quota of coins of the same sort in every coin's neighbourhood is much greater than the quota every single coin originally had preferred.

3. "Free to Choose?"

Let me conclude with a remark on Coleman's suggestion to explain authority systems as contracts between free and rational agents, who agree to submit to authority.

In sociology this idea may draw attention to aspects of organizations or hierarchies, which have gone unnoticed until now. In economics, however, in the recent decades this approach has become

an elaborate and flourishing subject of research since the pioneering works of Ronald Coase (1937) and Armen Alchian (1977). Nevertheless, the classical sociological view of authority systems should not be completely abandoned. To be sure, many more authority systems than previously guessed can be regarded as contractual relations.

But if there is one lesson to be drawn from history, it is the fact that quite often people are by no means "free to choose" whether to submit to an authority or not. In cases, where power is rigorously exercised, people find themselves in a situation with one single option, alternatives being infinitely costly. Power is the only means of making people do what one wants them to do without their agreement or even against their wish.

4. Conclusions

The economic approach proves to be an extremely powerful tool of explanation in many fields of human behaviour. James Coleman's paper provides another and a most interesting example.

But, if I may continue in the use of the language of craftsmen, a tool box, that contains one all-purpose-tool only, might leave you with problems unsolvable. We should welcome attempts to equip us with powerful tools, whatever their shape and origin may be (see, for an outstanding example, Akerlof, 1984): For not each and every sociological headache can be treated like an economic broken leg.

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