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The Missing Piece in Rational Choice Theory*

“For you have need of an expanse that only the language
within you can provide.”

Antoine de Saint-Exupéry, *Citadelle*, XI.

ABSTRACT

James Coleman’s project was to resocialize rational choice while keeping micro-macro connections as operational as they are in economics. His general model in *Foundations of sociological theory* either accounts for norms while effacing social organization, or brings social organization to the fore (in the reduced form of social capital distribution) while failing to generate sufficient norms. A parallel simulation study suggests that the problem lies in the type of rationality itself: Coleman’s rationality is merely calculative; only interpretive rationality can take collective entities into consideration. This change would require the rational actor to accede to a less cursory type of language, intensional rather than extensional.

Coleman’s project for re-founding the theoretical language of sociology

James Coleman spent the 1980s developing a project for putting social theory on a new foundation using the postulate of rational choice. His approach should draw great attention from economists, *all* economists: orthodox mainstream economists should be drawn to the fact that Coleman’s project aimed to resemble their own, while heterodox economists should be drawn to how the project *also* aimed to be different from orthodox economists’ economics.

At the annual convention of the American Economic Association in December 1983, James Coleman began to investigate “how social organization can be most profitably incorporated into economic theory”. His

* My thanks to Alban Bouvier, whose penetrating criticisms strongly influenced this text. I also benefited from suggestions from the *RFS* reading committee and Philippe Mongin. Possible errors and insufficiencies are mine.

conclusion: “This is done not by abandoning the conception of rational action of individuals, but by changing the organizational assumptions that translate individual action into systemic or collective action.” (1984, p. 88). The market was of course a powerful “micro-to-macro engine”, he pointed out, but economists themselves had demonstrated its inefficiency with regard to public goods and social choice, and in the matter of trust, the work of identifying the relevant micro-to-macro mechanism had not even begun.

Two years later, at a conference on rational choice that brought together economists and psychologists interested in the results of experimental economics and experimental psychology, he put forward the thesis (paradoxical given his audience) that economic theory would have more to gain by putting more (social) structure into the move from micro to macro than by putting more (psychological) structure into rational choice. Like Friedman (or Becker),⁽¹⁾ he was fully aware of the descriptive weaknesses of the micro model but deemed that in addition to its normative virtues it was also “adequate for most problems in economic theory as descriptive theory” (1987, p. 184). The undertaking was already underway, and this was no longer the moment to entertain doubts about the realism of the standard rational choice model.

Coleman’s contribution to the *American Journal of Sociology’s* combined sociology/economics issue in 1988 shows how quickly the project was being realized. Through three of its avatars—“obligations and expectations, information channels, and social norms”—the notion of social capital functions as a “conceptual tool” for “introducing social structure into the rational action paradigm” and as a first enacting of that procedure. The main propositions of this innovative article were later embedded in the much greater and more ambitious set of chapters that forms Part II of *Foundations*, a general theory of norms. This is decidedly the theoretical core of the 1990 work. That same year, James Coleman constructed his simulation exercise, whose great strength was to translate the ambitious theoretical project into an extremely clear reduced model.

Let us examine more closely the stages and references of Coleman’s project. The 1988 article is very clear: given the two major traditions of social science research, *i.e.*, methodological individualism, wherein the macro level is constructed on the basis of the selfish, optimizing individual, and methodological holism, wherein the individual is moved to act by and in accordance with “social norms, rules, and obligations” (1988, p. 95), it was time to develop a “theoretical orientation” that would take off from the first and assimilate a part of the second. Coleman was perfectly aware from assimilation attempts prior to his own of the two risks inherent in this type of undertaking: producing a “pastiche”;⁽²⁾ that is, merely adding ad hoc variables to

(1) I am of course referring to Friedman’s celebrated, influential defense and illustration of methodological instrumentalism (1953). Friedman and Becker were Coleman’s

colleagues at the University of Chicago.

(2) Alban Bouvier suggests the term “patchwork” would be more representative of Coleman’s thought.

what had been a homogeneous corpus; and producing what I will call a “miniature”, that is multiplying micro analyses without discovering the macro propositions that are economists’ great strength. The decision-making context of *homo economicus* had to be resocialized not only to better account for his individual actions and the evolution of economic organization (for Coleman, Granovetter’s critique of the new economic institutionalism through his “embeddedness” methodology went no further than this), but also to increase the intelligibility of properly *social* organization. *Thus resocialized*, rational choice would, he believed, rebound into this socio-cultural environment and thereby help explain it, instead of leaving that environment to function as an independent variable. To (over)simplify, the point was not only to use embeddedness to correct rational choice but also to use rational choice to correct embeddedness.

It can be observed (clearly without the least indulgence on my part) that Coleman’s project would receive even greater assent from economists in this first decade of the twenty-first century than it did at the threshold of the 1990s. It takes up the postulate of rational choice accepted by most economists while applying that postulate more flexibly than they, with a richly structured environment made up of social, cultural, and political data that the project also promised to try to endogenize.

This is precisely why the obstacles that I see the project running into are so revealing. I hope to make clear that the powerful machinery James Coleman conceived for linking “rational choice”, “norms”, and “social organization” jams up when one tries to set it in motion. It is as though it were missing an essential component, *whose absence could not be discovered until the labor of extending, generalizing, and socializing the rational choice paradigm that James Coleman devoted the last years of his life to had been accomplished*.

My thesis here is that the “missing part” is language. We shall be led to the conclusion that instead of enriching rational choice theory, the new “social organization” variable causes it to implode. Rational choice theory is incapable of “speaking” of social organization, very simply because *homo rationalis* conceived as a calculating machine is himself incapable of “speaking”.

Specifically, my thesis consists of three interdependent propositions, and as many definitions. First the propositions. Coleman did not fully realize his project and rational choice sociology has failed to integrate “social organization” because: 1) the concept of rational choice borrowed from economists (*i.e.*, an ability to calculate) is incapable of handling any “collective” object; indeed: 2) handling a collective object requires “language”, and 3) language requires that the concept of rational choice subsume ability to calculate under ability to “interpret”.

Three terms in these propositions need to be defined: “language”, “collective”, and “interpretation”. The requirement of defining them exhaustively would discourage even the most presumptuous economist. Fortunately, we can settle for minimal definitions, because the intellectual space in which

Coleman's "theoretical orientation" is deployed, wherein rationality is confined to the order of calculation, makes it possible for me to borrow the blunt categories of formal logic.

Let us begin with "language". An attentive reader of *Foundations* would perhaps be surprised by the affirmation that language is absent from Coleman's rational choice sociology. She would justifiably cite the pages on the role of "legitimacy" with regard to norms, or better yet, the role of "gossip" with regard to reputations. I shall therefore correct my diagnosis, but in a way that implies no repentance on my part, given what "ordinary language" is: rational choice sociology does not so much presuppose the exclusion of all forms of language as it assumes that the only language there is is isomorphic to the world.⁽³⁾ (It should be noted that this form of language is typical of logical positivism.) In formal logic terms, this type of language is said to be "extensional". The relevant principle in language thus defined is extension or extensionality, which holds that two sets containing the same elements are identical. In contrast, "partisans of *comprehension*, or *intension*, demand more. The set of odd numbers between 4 and 8 and that of primary factors of 35 are identical in extension, but not in comprehension because they correspond to two different concepts. The extension perspective better lends itself to mathematical computation" (Vax, 1982, pp. 28-29; italicized in the text).

If language is passed through the sieve of the extension principle, all that remains is a collection of labels pasted onto the objects of external reality, a reality that could be defined independently of language. Language in this understanding can "only" say about the world what is true and false (already a considerable power); it does not help fashion the world, transform it, enlarge it—in sum, it does not create, as Popper, that implacable enemy of logical positivism, might have put it.⁽⁴⁾ In the conclusion I will point out that the "neutrality" that characterizes language in rational choice sociology bears a striking resemblance to the "neutrality" of money in rational choice economics. The conjunction of these two neutralities produces and finalizes a profoundly instrumentalist social science research method that is perfectly in line with logical positivism.⁽⁵⁾

As for the other two terms, it should suffice to indicate for the reader's intuition that a "collective" is an entity that can only be defined in intension

(3) See Haack (1978), and Malherbe (1981). With this conception of language, we are back to early Wittgenstein. Current neoclassical theory likewise accepts isomorphism, as is revealed in its pathological attraction for information asymmetry problems, clearly fueled by a fantasy of language as perfectly transparent (see conclusion, which discusses this "mutual fund" of ideas).

(4) In Popper's terminology (1979, ch. 3), world 3, the world of objective, communicable

thought content, has to be "added" to worlds 1 (material objects or states) and 2 (states of consciousness). See also De Munck (1999, pp. 102-104, pp. 130-131). The idea of enlargement presupposes a certain autonomy for language. This in turn is technically based on the notion of "referentially opaque contexts" (see second section of this article).

(5) See Friedman (1953), and Malherbe (1981); also Popper (1963, ch. 3) on instrumentalism in philosophy of science.

(it is a concept, not just a collection of individuals) and that whereas calculation amounts to choosing an element from a set defined in extension (defined, that is, as a collection of elements),⁽⁶⁾ “interpretation” implies constructing, by intension, the set within which one will then choose an element. When the time comes, I will adopt richer and more sophisticated definitions.

Equipped with the present definitions, we must now consider the difference between Coleman’s project and his model(s), so as to make the content of my thesis and method of argumentation fully explicit. As already suggested, Coleman proposes two models, a general one, developed in chapters 10, 11, and 12 of *Foundations*, and an applied model, used for the simulation studies published the same year as *Foundations*.⁽⁷⁾ In the first section I will be studying the general model; in the second, the applied one.

The result of the general model is essentially *negative*: the project of socializing rational choice cannot be realized due to the very nature of rational choice as conceptualized in the tradition Coleman means to attach himself to. The applied model is the one that enables us to formulate a *positive* hypothesis about what rational choice lacks, namely, the aptitude to qualify forms of collective membership, since doing so presupposes language in the full sense of the term; *i.e.*, not only extensional or calculative but also intensional or interpretive.

If it were necessary to hazard a conclusion at this point, it could be that Coleman’s project requires other types of models, which would have to be sought at the intersection of a certain type of structuralism (in terms of networks) and a certain type of individualism (in terms of conventions).

Coleman’s general model and the language of calculative rationality

In chapters 10, 11, and 12 of *Foundations*, Coleman sets out to account for both the function and emergence of norms⁽⁸⁾ in such a way as to avoid the pitfalls of both functionalism as it has been used in a certain type of sociology and the reductionism specific to neo-classical economic theory. The first condition for norm existence is the presence of an externality; that is, an event, which may be an action, that brings about either positive or negative

(6) This conception of computation is said to refer in formal logic to the “Turing machine” notion (see, for example, Parrochia, 1992, appendix) and in rational choice axiomatics to the fixed, predetermined character of the set of states of the world: there are no “unforeseen contingencies” (see Kreps, 1990).

(7) I prefer to discuss the simulation model rather than the formal model in chapter 30 of *Foundations* because it provides more new matter than the general model in chapters 10

to 12.

(8) Coleman defines norms as follows: “A norm concerning a specific action exists when the socially defined right to control that action is held not by the actor but by others. As discussed in Chapter 3 (Rights to act), this implies that there is a consensus in the social system or subsystem that the right to control the action is held by others.” (*Foundations*, p. 243).

consequences for actors who cannot control it. This may lead to the spontaneous establishing of a market for “control rights”, in which case a norm would be useless. The reasoning here is borrowed from Coase (1960): if there is no transaction cost and if the benefit accruing from “victims” cancelling the externality (assumed negative) is greater than the benefit accruing to the “authors” for causing the externality, then this arrangement will be a mutually profitable transaction in which it doesn’t matter whether the victims “bribe” the authors or the authors compensate the victims, with the result that the distribution of rights does not matter. Naturally this case is not the most frequently occurring one, but it is interesting to note in passing that norms are never considered anything more than second-best solutions compared to market exchange. It is therefore in the absence of a market for “control rights” that “demand for norms” appears.

But this demand only arises if an additional condition is met; rational resolution of the “the second-order free-rider problem”. Clearly “the condition is that under which beneficiaries of a norm, acting rationally, either will be able to share appropriately the costs of sanctioning the target actors or will be able to generate second-order sanctions among the set of beneficiaries that are sufficient to induce effective sanctions of the target actors by one or more of the beneficiaries” (*Foundations*, p. 273). Assuming these two conditions are met, norm existence is guaranteed by a sort of generalized cost-benefit analysis (the principle of which is borrowed from neo-classical economists without their mathematical formalism): compliance with norms “is merely the result of the application of the principle of maximizing utility under different constraints” (*ibid.*, p. 286).

We can straightforwardly admit that all of this is excellent (though fairly orthodox) economics, in fact more elegant and intuitive than economics usually is, and what’s more, it has the merit of tackling an object that up until then had resolutely resisted economic analysis: norms as *multilateral* rules, above and beyond the particular case of “contracts” (to which the new micro-economics was devoting its finest attention),⁽⁹⁾ which are *bilateral* rules resulting from agreement between private wills.

If Coleman’s presentation stopped there, the only reproach an economist could make with regard to the *model* is that it is not very faithful to its author’s *project*. What has become of “social organization”, which was supposed to be incorporated into rational choice theory?

The model’s internal response to the project’s requirements is the notion of “social capital”. “Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: they all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure.” (*Foundations*, p. 302; 1988, p. 98). Coleman then selects three manifestations of this

(9) For a non-technical presentation, see Favereau and Picard (1996); also Brousseau and Glachant’s broad panoramic view (2000).

multi-dimensional variable: 1) reciprocal obligations and expectations, which allow structure members to show that they trust they can both request and receive help from each other; 2) access to information channels, which help save time and economize attention; 3) the existence of social norms, which stabilize expectations about others' behavior and guarantee certain types of cooperation.

This list has one remarkable feature. We began with norms, the project of saving norms from an overly holistic type of sociology⁽¹⁰⁾ so as to reintegrate them into rational choice sociology. In a way, the operation has been too successful, because there is no longer any trace of social organization. This is why Coleman introduces the idea (hardly debatable in principle) that various aspects of the social structure can represent a productive resource for at least some rational agents. But norms themselves are one of these aspects!

In fact, there is no reasoning error here. I have said that Coleman has to avoid the pitfalls of pastiche and miniature. The notion of social capital works naturally, as a kind of additional resource, to enrich the mechanics of rational individuals' choice-making within utility maximization programs –that way the “pastiche” danger is skirted– and it provides an efficient shortcut for “making the micro-to-macro transition without elaborating the social-structural details through which this occurs” (*Foundations*, p. 305; 1988, p. 101) –that way the “miniature” danger is skirted.

From then on we have a complete conceptual model, even in the absence of an explicitly formalized social structure: social structure can be projected onto the different varieties of social capital; these can then be integrated into the utility calculations which structure individuals' rational choices. The only remaining question is whether the aggregation and interaction of all these choices do indeed reproduce social organization –if not its structural form (that would be an overly ambitious goal), at least its reduced form– I am intentionally using econometricians' terminology here –represented by the varieties of social capital (a much more realistic goal).

In the continuing effort to indicate how Coleman's model jams up when put into operation, we may now distinguish two cases.

The first is one where the model produces a solution that can at least be reproduced. In the chain running from social capital to rational individual choices and back again to the social capital (therefore norms), there is a “fixed point” (for instance, norms).⁽¹¹⁾ This is a success for the *model*, but one that will be highly costly for the *project*. First, the need to get from social capital to social organization becomes less urgent; second, the sociologist's enrichment of rational choice economics becomes a paltry thing because in

(10) The required reference here is Wrong (1961).

(11) In mathematics, a fixed or invariant point M in a (point-to-point or point-to-set) mapping u gives $u(M) = M$. Once again, I am

(metaphorically) using the technique for linking micro and macro that Coleman so envied economists for. M is the structure of social capital; u the set of individual behaviors influenced by that structure.

this case his recourse to the vocabulary of “rights”, “consensus” and “legitimacy” (language introduced in chapter 3) is essentially rhetorical: we are inside the purely calculative logic of individual interests, sufficient unto itself.

The second case is one where the model does not deliver an equilibrium solution; there is no fixed point. Individual choices do not reproduce the social context that inspired them. This is not necessarily a failing of the model, even though the model obviously needs bolstering, which it could get either through analysis of the conditions that preclude such reproduction (this time it is indispensable to get from social capital to social organization) or a description of possible evolution scripts. Coleman takes the second of these directions.

Looking for possible scripts requires developing points that up until this point remained implicit; for example, with reference to the three varieties of social capital the opposition between those that correspond to appropriable resources (“relations”, in common parlance)⁽¹²⁾ and those that refer to intrinsically collective resources (degree of cooperation within the social structure). Norms fall essentially into the second category, which is closely related to the family of “public [*i.e.*, collective] goods”; that is, goods in which rational individuals would naturally tend to under-invest, in accordance with a mechanism well known to economists. On the contrary, rational individuals are moved to take pains to maintain their “relations” capital, rendering service to those who might be able to do the same for them. This opposition means the *prognosis* regarding the possibility of reestablishing a fixed point can only be fundamentally pessimistic, at least with regard to norms. But weren’t norms to be, justifiably, the very focus of Coleman’s analytic attention in realizing this project? Worse yet, by moving in the “possible scripts” direction, the *model* has a destructive effect on the *project’s* relevance. The *diagnosis* that the sociological model of rational choice enables us to specify identifies the unique source of the problem: *none other than rational choice itself*, at least as in the form Coleman uses, taken from the neo-classical tradition of methodological individualism.

The conclusion for the general model is strong, though Coleman does not formulate it: theoretical mobilization of rational choice as the *main cause* of norm existence runs up against the impassable limit of its own *intrinsic consequences*.⁽¹³⁾

We might expect that at this point “rights” and “legitimacy” would be called in to rescue the flawed logic of individual interests. But Coleman cannot do that because of how he has defined those terms. The “right” for an

(12) Bourdieu emphasized the importance of this category in his approach to social capital; see his pioneering 1980 text. On the variety of conceptions of social capital, see Borgatti (1998).

(13) My criticism is not that the rational

choice explanation of norms is imperfect, which would be trivial, but rather that this imperfection pertains to the very essence of rational choice as Coleman conceived it, with the result that rational explanation of norms becomes the exception rather than the rule.

individual to perform an action is based on the absence of “dispute” from other individuals that the action would affect: “rights imply intersubjective consensus” (*Foundations*, p. 50). Where can such consensus come from? Neither from law, analyzed elsewhere as pure constraint (p. 49), or reference to what is just (p. 53), solely from the same play of interests (and/or power) as norms! (p. 52).⁽¹⁴⁾ Whereas in the first case, “rights” and “legitimacy” were useless, in the second, where their usefulness is patent, they are inoperative by definition. For there to be “right”, there cannot be “dispute”; if there is “dispute”, that means there is no “right”. We might have thought that a “dispute” would bring about the opening of a debate in which arguments and justifications would come to confront each other. But by deliberately pushing aside all juridical or ethical references, because the point is to remain strictly within individual calculative, non-cooperative rationality,⁽¹⁵⁾ the rational choice sociologist (exactly like his economist colleague) utterly disregards the intense discursive activity that surrounds norms in our societies, and strictly limits *homo rationalis*’ language competence to the formulating of individual interests.⁽¹⁶⁾

The brief paragraph on the “legitimacy” of rules (*Foundations*, pp. 287-289; see also p. 293) is particularly instructive. It opens with an astounding concession – “It may be that not all such acceptance [of a norm that runs contrary to immediate interest] can be accounted for by rational choice theory *as currently constituted*” (my italics)– and proceeds to present a situation where the notion of “legitimacy” is dissolved entirely in the logic of well-grasped individual interest. A few pages further on, Coleman makes it impossible for himself to assimilate the “legitimacy” of a norm to its inculcation on the grounds that inculcation, the internalizing of a system of sanctions levied for deviating from the norm, is stronger than any “legitimacy”⁽¹⁷⁾. No salvation outside individual interest!

The language of calculative rationality is entirely non-autonomous from the reality of individual interests. It either expresses that reality (sociologist’s position) or conceals it (economist’s position);⁽¹⁸⁾ it could not possibly

(14) It is therefore, for Coleman, the systematic, massive presence of externalities that differentiates “norms” from “rights”; the difference between the two notions, in this conception, is one of degree rather than nature.

(15) It is likely that Coase’s influence (1960, pp. 43-44) was decisive on this point: a “right” is understood as a “thing”, like goods, that can be exchanged. This makes the language-partaking nature of rights secondary.

(16) This creates strong tensions within the text. Two illustrations: 1) as mentioned, Coleman rejects any idea of “rightness” in order to found acceptance of “rights”, but he nonetheless uses the qualifiers “proper and correct” to characterize judgment of actions that conform to norms (*Foundations*, p. 242); 2) in practice, the examples given of changes in

belief that make it possible to reallocate “rights” (pp. 54-59) imply discussions and even ethical inquiries in which people put themselves in others’ places.

(17) Without this sanction, an individual whose behavior is unobservable could deviate from the norm (*ibid.*, p. 293). It is precisely this configuration that is the point of departure for the micro-economics of contracts and incentives (see n. 10). In this sense Coleman’s norm model and the economic model of the agency relationship constitute a whole that crosses over disciplinary boundaries.

(18) In economists’ terminology, such misrepresentation takes the form either of “moral hazard” (hidden action) or “adverse selection” (hidden information).

change, displace, or transcend it.⁽¹⁹⁾ Coleman's model cannot resolve the problems it manages to pose.

Clearly Coleman wanted to move from social capital to social organization to get out of this impasse, or at least to examine its nooks and crannies. What explains rational choice's peculiar property of hamstringing its own explanatory power? Clearly Coleman does not ask this question, but it is precisely this question that he answers, through the components of a reconstitution of social organization outlined in the 1988 article and chapter 12 of *Foundations*, which are then taken up again, clarified, generalized, and systematized in the simulation exercise he published the same year as *Foundations*.

These components are the focus of the discussion that follows.

Coleman's applied model and the language of interpretive rationality

As early as the 1988 article (pp. 105-109), the content of which was taken up and extended in *Foundations*, Coleman began preparing the ground for getting from social capital to social organization, suggesting that the system of external sanctions on which his general model of norm emergence and functioning was based was conditioned by degree of closure of the social networks in which concerned individuals moved. It would be hard for mutual control by individuals within an open network to exist; a closed network was a necessary condition for setting up such a mechanism –necessary but not sufficient, given the “public goods” nature of most cooperation norms. We know that the type of game that structures the interactions underlying the problem of public goods provision is the prisoner's dilemma.⁽²⁰⁾

Coleman thus developed a simulation model to explore the consequences of variation in degree of social network closure on cooperation behavior (inversely, defection behavior) among rational individuals in an interaction structure of the iterated “prisoner's dilemma” type. Each individual remembers the identity of those with whom he or she has interacted during the last “m” interactions, and remembers the behavior of the person he or she dealt with during the last interaction, as well as his or her own behavior in the interaction preceding that. An unidentified interaction partner is a “stranger”; an identified one is a “new acquaintance” (*i.e.*, with whom one has engaged in one shared interaction among the preceding “m” interactions) or an “old acquaintance” (at least two such interactions). This means as many as three types of strategy can be distinguished. For example, choosing to defect against a stranger + choosing to cooperate (defect) with a new or old

(19) Pages 283-286 of *Foundations* study sanction by gossip, but strikingly, Coleman reaches the conclusion that gossip is only effective in closed social networks, degree of closure being the only essential factor of effec-

tiveness, as will be discussed in the second part of this article.

(20) Coleman cites Ullmann-Margalit (1977) and Alexrod (1984).

acquaintance if in the preceding interaction that acquaintance chose to cooperate (defect), unless, in the case of an old acquaintance, defection was chosen in the interaction preceding that one, which would make the other's defection in the following interaction excusable. The number of individuals in the network can vary from 3 to 10.

As a function of these various parameters, Coleman performs three simulations, ⁽²¹⁾ the results of which seem to corroborate the intuitions of the general model: "These results show [...] that the degree of closure of social structure can affect greatly the actions in a fixed population and can affect even more greatly the mix of individuals between those who cooperate with strangers and those who exploit strangers." (1990b, p. 268). And indeed, generally, *the higher the number of individuals with whom one is likely to interact, the lower the equilibrium percentage of cooperative individuals.*

There is no point in detailing Coleman's experimental setup further, and we can fully accept the conclusion that the applied model confirms the general one. But this only reconfirms (and surely aggravates) the discordance between *model* and *project*. Have we made no progress then? On the contrary, the extreme clarity of the simulation model (and on this point any economist would applaud the sociologist's technical expertise) brings to the fore a new and crucial bit of information, the beginning of an answer to the question raised at the end of the first part of this investigation. Our perplexity about the explanatory value of rational choice –it ultimately turns against itself– is transformed almost naturally into a precise conjecture about the "missing part" of such rational choice sociology (the *sociology* being in this respect more fruitful than rational choice *economics* because at least it has a re-foundation purpose, and therefore in a way works to push rational choice beyond itself).

Let us consider first how the simulation model is constructed. Coleman is careful to specify that by norm he means prescription or proscription of an action, supported by external sanctions and excluding any and all internal (*i.e.*, internalized) sanctions. Let us accept this exclusion for the time being. Coleman then introduces what he calls a "terminological convention": "Although I will use both the term 'norm' and the term 'sanction', I will mean by 'norm' nothing more than the set of sanctions that act to direct the behavior in question." (1990b, pp. 250-251). As Majewski points out, the purely behavioral and indeed behaviorist characterization of norms in the "comment" that follows presentation of the model, lacks precisely what defines normativity, *i.e.*, the reflexivity by which a rule's existence is not exhausted by the existence of behavioral regularity: the rule has to be followed (or not) *in that it is a rule.* ⁽²²⁾ This criticism is directly relevant for

(21) I leave aside here the (non-simulated) calculations related to the problem of the second-order free rider, where Coleman sets a limit of three individuals.

(22) This point is no longer controversial in

philosophy of law (see Hart, 1976, ch. 1) or philosophy of language, at least in post-Wittgensteinian circles (see Baker and Hacker, 1984, pp. 312-313; also n. 17).

the question of language, because in virtually every case we can think of, recognizing a rule *as a rule* requires articulating it in language,⁽²³⁾ and the fact is that this operation mobilizes interpretive cognitive abilities rather than calculative ones. That criticism is perhaps unfair, however, inasmuch as any modeling enterprise runs into powerful technical constraints.

But what about the applied model's *deductions*? The "social structure of interaction" has a decisive impact on the type of behavior (cooperative or non-cooperative) that a rational individual can expect from the person he or she is dealing with. We know the "pay off" for this rational individual varies 180° depending on type of behavior encountered. Consequently, to the limited extent the model appears correct, it in fact obliges us to think that supposedly rational, calculating individuals will integrate the new object –*i.e.*, the collective they form with their fellow human beings– into their anticipations and preferences.⁽²⁴⁾ In other words, calculative rationality itself, *unless it were to contradict itself*, requires going beyond that which defines it toward a vaster type of rationality. We sense a possible paradox here, because going beyond the limits of the calculative also means, for calculative rationality, contradicting itself.

To respond to this series of questions, the most pragmatic solution is very simply to "try" to introduce collective objects such as "social interaction structure" or "social organization" into the utility function and thus into rationality –and examine the result. This is the first step, but we shall see that the operation is much more problematic than expected. The second stage involves "trying" to link these difficulties to the necessity of moving from extensional to intentional language, and we shall see that *that* operation is not in fact artificial, as we may have feared.

1) Why not enrich individual rationality by adding collective variables, such as degree of cooperation, to utility-function arguments, *e.g.*, the usual private variables such as consumption or leisure time? We immediately feel a sort of awkwardness in putting preference for a more cooperative collective on a par with greater purchasing power. We can identify at least four possible causes of this sense of discomfort, discomfort which may even amount to an intuitive sense of inconsistency or incoherence:

i) Preference for a type of collective cannot be reduced to the *consequences* of the individuals relations with this collective on the standard private utility function arguments. Rather we must add another consideration, that goes beyond and is independent of such consequences: the *nature* of these relations.⁽²⁵⁾

(23) See Ganz (1971).

(24) It was therefore no innocuous move to hypothesize the exclusion of internal treatment of norms. This ultimately prevented Coleman from satisfactorily handling external treatment. Likewise the position he took with regard to psychologists in 1985 resulted from a misapprehension: priority should have been given to revising micro hypotheses since the stated

objective was to enrich the move from micro to macro!

(25) This component means that our problem of integrating the collective cannot be resolved by means of Coleman's notion of public good. For an illuminating application to family economics of the distinction between nature and effect as it pertains to interpersonal relations, see Thévenon (2003, ch. 2).

ii) It is a delicate, if not impossible, matter to separate preferences for a less inegalitarian or more democratic society (for example) from all normative or ethic considerations, whereas normative neutralization does not usually interfere in our choosing between apples and carrots.

iii) In the preference for a solidary-type social organization over another type, not just the degree of leeway but the very content of the freedom involved is different from what it is in the preference for green cars: the second is autonomy-type freedom; the first, responsibility-type freedom. ⁽²⁶⁾ An actor who prefers to live in a more cooperative world cannot fail to behave cooperatively himself, unless he is totally inconsistent: Does or doesn't he want to get beyond the prevailing mode of rationality? The problem is surely related to the question of preferences about preferences and/or the question of lexicographical preferences. ⁽²⁷⁾

iv) A preference for more rather than less cannot be measured as easily when it pertains to *qualities* of the collective as when it pertains to *quantities* consumed. How can the proposition, "I prefer a more just society over a less just one" be instrumentalized?

After considering these four complications, we understand better not only the practical strengths but also the radical limits of reducing the "social organization" variable to the "social capital" variable: the second is perhaps what is left of the first once one decides to disregard all difficulties and think of private and collective arguments as identical with respect to the utility function.

2) Do these difficulties become clearer if we relate them to the type of language underlying the calculative rationality of Coleman's model? The answer is yes, and it in fact enables us to go much further: to apprehend a collective object within individual rationality, it is impossible to stick to extensional language and indispensable to move to intensional language. There are three reasons for this, which amount to three specifications of the word "intensional":

i) A collective cannot be defined as a set of individuals (this would correspond to the extension principle); it is a structure on this set, a concept rather than an enumeration. This first manifestation of intensionality in any and all objects can be summed up thus: *it has to be said to be seen*. Even more than an object of physical nature, a collective can only be perceived (abstractly!) if it is named. ⁽²⁸⁾ This time, language is not entirely isomorphic to the world; it precedes, comes ahead of, exceeds the world. How can we examine democracy in a country or cooperation within a group without adequate language for doing so, *i.e.*, language that contains the appropriate concept?

(26) See Genard (1999).

(27) Key references for these questions provided in Favereau (1995).

(28) I am supported here by Searle's thesis:

"institutional facts" are of a different nature than "brute facts"; they presuppose (intensional) language. See also De Munck (1999) and Livet and Ogien (2000).

ii) I just mentioned (abstract) perception of collective objects. This metaphorical expression has to be replaced by the appropriate technical term from logic, “propositional attitude”; more exactly, by the particular attitude called belief. An actor interested in types of collective will say that she believes or thinks that a given social interaction structure is (for example) closed. The point is not to devalue this propositional content, but to become conscious of a particular characteristic of operators of propositional attitude, a property well known in the field of logic: referential opacity. Substituting a term with the same denotation as another, a predicate with the same extension as another, or a proposition with the same truth-value as another, no longer preserves the truth of the whole. ⁽²⁹⁾ “The way in which an object is referred to affects the truth value of the sentence”, as Searle put it with his characteristic clarity (1995, p. 19). Once again, language lays claim to a certain independence from objective reality. This second manifestation of intensionality in any and all collective objects can be summed up thus: *it has to be believed to be said*.

iii) To be able to speak of collective objects, we have just added a new entity to the usual entities of the world (which are, in Popper’s terminology, the material and physical objects of world 1 and the subjective, personal states of world 2). This new entity may be called “manners of referring” to the other entities. ⁽³⁰⁾ But we cannot stop there, since our aim is to qualify collectives, and individuals are directly concerned when it comes to knowing whether their way of referring to collectives is shared by their fellow human beings. If “manners of referring” can be shared (and I will not say anything here about how such intersubjectivity is attained), then language has enabled us to enrich the ontological equipment of the human world by adding world 3, the objective content of thought, to worlds 1 and 2. If they cannot, we will have merely increased the entity population of world 2. At the same time, we must “enrich” human beings’ cognitive equipment to enable them to handle this third family of entities. Let us say that their rationality is no longer merely calculative, but interpretive, ⁽³¹⁾ recalling that what that term designated in the introduction was the ability to choose both a concept and an element from within the set defined by that concept. ⁽³²⁾ I can now make it clearer why it is that I speak *here* and *in this way* of “interpretation”. The word has a specific meaning in formal logic: a structure that consists in the “concrete” specification of elements in the world and the relations to which the set of correct formulae in a formal system apply. If all these formulae are true for a given

(29) See Haack (1978). The founding reference is Quine (1961, ch. 8), from whom I borrow the following example: consider the statement “Philip believes that Tegucigalpa is in Nicaragua”; if we substitute “capital of Honduras” for “Tegucigalpa” (the two are linked by identity), the resulting statement, “Philip believes the capital of Honduras is in Nicaragua”, obviously does not have the same

truth value.

(30) The expression is Quine’s (1961, p. 148).

(31) On how calculative and interpretive reality fit together, see Favereau (1998), Piore (2002) and Favereau, Biencourt, and Eymard-Duvernay (2002).

(32) Characterization borrowed from the legal philosopher Ronald Dworkin (1989).

interpretation, we say that the interpretation is a “model” for the set of formulae. This definition is as valid for intensional as extensional language. What changes is that from now on the “concrete” world will be specified by what is in fact a twofold enlarging of it: first, enlargement to include “context” variables, among which figure our “collective manners of referring”⁽³³⁾; second, enlargement to include “possible worlds” associated with either individual or collective propositional attitudes,⁽³⁴⁾ which we have chosen to integrate in order to be able to speak of collectives. Lastly, I must overcome the reader’s undoubted reluctance to believe that we have closed the gap between the logician’s formal version of interpretation and the legal philosopher’s discreetly hermeneutic one. At the end of a long, meticulous philosophical progress in which text and action are brought together, Ricœur writes: “What must be understood in a narrative is not first who speaks behind the text but what is spoken of in it, the thing of the text; that is, the sort of world the work deploys in front of the text as it were.” (1986, p. 168; see also pp. 114-115, pp. 208-211). In any case, it should be clear that the sole resource of binary true/false logic,⁽³⁵⁾ with its grip on worlds 1 and 2, will not suffice to explore the “sort of world” represented by world 3. The third manifestation of any and all collective objects can be summed up thus: *it has to be interpreted to be believed*.

I conclude this investigation of (intensional) language as the missing piece of Coleman’s rational choice sociology with two observations. Though this study is obviously far too brief, I hope the reader is at least convinced that the problems raised by Coleman’s project of grafting social organization onto rational choice theory are immensely difficult. Retrospectively, what may be understood from Coleman’s model(s) and the obstacles encountered in the attempt to realize his project, is that the only way the extensional language of purely calculative rationality can integrate collective objects is by disintegrating them.

Coleman’s project sins by underestimating the individual’s cognitive skill. For its part, this critique may seem to idealize the individual in attributing to him or her an interest in a macro-economic (macro-social, rather) object such as collective organization, of which s/he is at best a modest member. But we should turn back a moment to the simulation model, one surprising, as yet unmentioned result of which is that “long memories compensate for less structural closure in social interaction” (1990b, p. 260). This means that by increasing the value of m , the individual in the iterated prisoner’s dilemma helps create more cooperation because he or she is better able to reward past

(33) The “framing effect” brought to light by Tversky and Kahneman in experimental psychology (1986) bodes well for the *empirical* relevance of this approach.

(34) And in general associated with the modalities (“it is possible that”, “it is permitted to”, ...) that actors use. Quine (1961) showed modalities to be the second source of referential

opacity. My presentation is meant to be as simple as possible; for more rigorous ones, see Chellas (1980), and Stalnaker (1999).

(35) In Wittgenstein’s later philosophy, there are many other language games besides the one of judging all propositions in terms of the true/false opposition. On interpretation in Wittgenstein’s thought, see Bloor (1997).

instances of cooperation or sanction past defections. With that Coleman was holding a powerful, original means of illustrating individuals' aptitude for weaving social ties.⁽³⁶⁾ He had the solution –but hadn't grasped the problem.

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* *

This overly succinct investigation into the piece missing from rational choice sociology, an examination of the last figure in the work of James Coleman, leaves me the space and indeed commands me to open discussion –and conclude– by way of three generalizations.

1) It is worthwhile to return to the ties between Coleman's project and that of mainstream twentieth-century economic theory. Each brings to light nearly invisible aspects of the other. (Neo)classical economics says that *money is but a veil*, neutral in the long-term with regard to the real economy. Rational choice sociology implies, if it does not say, that *language is but a veil* laid over independent objective reality, reality it does not help constitute. While it is difficult to deny that these two programs together constitute a powerful social science research methodology called "rational choice theory", it is not without interest to go behind the scenes, where we may observe that this methodology has a fundamental tendency to dissolve social institutions, at least the two primary ones: money and language.⁽³⁷⁾

If the thesis defended here is correct, then what James Coleman's partial failure shows is the impossibility of conceiving coordination among behaviors in entirely general terms without conceiving coordination among judgments upon behaviors.⁽³⁸⁾ *Homo rationalis* speaks, and because he speaks he cannot be defined exclusively by the fact that he calculates. But *homo rationalis* does more than speak: he interprets, and the faculty of interpretation is inseparable from the consciousness of belonging to collectives that have to be identified, qualified, criticized, justified, transformed. The rational choice paradigm can only coherently open up to a certain methodological holism by also opening up to the interpretive or hermeneutic tradition in social sciences. Pursuing the reference to logical positivism, I can conclude with an approximative but perhaps suggestive shortcut: *the "Colemanian model" corresponds to the philosophy of the early Wittgenstein whereas the "Colemanian project" required the philosophy of the later Wittgenstein.*⁽³⁹⁾

(36) This mechanism is symmetrical to an individual's choosing the time-span within which he will calculate the benefits accruing from a cooperative attitude; see Coleman (1990a, p. 288) and Favereau (1997).

(37) This parallel may be linked positively to Searle's previously cited analysis (1985), his idea being that institutional facts, the archetypal one being money, should be treated like language-dependent facts.

(38) See Corcuff's profound remark upon rereading Boltanski and Thévenot that this impossibility is the real message of the so-called economics of conventions (1995, p. 111).

(39) I am referring to the classic opposition between *Tractatus Logico-Philosophicus* and *Philosophical Investigations*. For a particularly clear introduction, see Malherbe (1981, chs. 4 and 5; see also n. 37).

If we turn now to current economic theory, its stated project is to account for organizations and institutions exclusively in terms of optimal contractual arrangements aimed at resolving the problems of asymmetrical information, namely “moral hazard” (that is, cheating by hiding an action) and “adverse selection” (cheating by hiding information). The unprecedented narrowness of this view of what characterizes an individual interacting with his or her fellow individuals takes on greater definition in light of the extensionality principle we have seen to be at work in Coleman’s project. The equivalent in economic theory is the following postulate (never discussed because it touches on the constitutive framework of general equilibrium theory): it is both possible and reasonable to define a configuration of perfect symmetrical information compared to which the practice of economic agents in the real world, degraded by the fall into uncertainty and asymmetry, may then be studied. From this derives the dream (or nightmare?) of absolute transparency. Such a postulate is properly insane as a characterization of the human world, unless human beings are shrunk down to the size of an ontology in which language is neutral. ⁽⁴⁰⁾ But if language is not neutral, as in Popper’s world 3, then rational choice economists and sociologists will have to flesh out their investigation of the effects of information asymmetry by taking into account its positive aspect –distributed knowledge.

2) The impasse that Coleman’s models of his project for synergizing individualistic and holistic social science traditions get stuck in points to the usefulness of quite another strategy: we should begin immediately by characterizing social organization –this is what the structural approach in terms of networks does– and just as immediately with the representations that actors develop of their common worlds: this is what the individualistic approach in terms of conventions does. Coleman’s question then becomes, what are the points of intersection between these two approaches?; that is, the mutual influences among categories of phenomena as dissimilar as social structures and mental representations. ⁽⁴¹⁾

3) This short, radical critique of James Coleman’s imposing labor of reconstructing social theory is ultimately anthropological. What human beings are able to do, for better and for worse, is not well apprehended by rational choice sociology (or rational choice economics) models. I have argued in essentially speculative fashion. It is therefore worthwhile to conclude by evoking an essentially empirical argument. At the anthropological level, there would seem to be little doubt about two conditions for acceding to a specifically human state: language and moral feeling. Though this text seems more

(40) This suggests (see n. 39) a new hypothesis for explaining neoclassical theory’s inability to integrate money: *homo economicus* does not have access to a sufficiently complex form of language.

(41) For a first step in this direction, see our introduction in Favereau and Lazega (2002). It is interesting given our thesis that Harrison White’s current studies are focused on the role of language.

focused on the first of these, it is “driven” by the conviction that rational choice theory cannot justify its claim to constitute the foundation of social science until it has assimilated both.⁽⁴²⁾

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Translation: Amy Jacobs

Previously published: RFS, 2003,44, 2

REFERENCES

- Axelrod Robert**, 1984. – *The Evolution of Cooperation*, New York, Basic Books.
- Baker (Gordon), Hacker (Peter)**, 1984. – *Language, Sense and Nonsense*, Oxford, Blackwell.
- Bloor David**, 1997. – *Wittgenstein, Rules and Institutions*, London, Routledge.
- Boltanski Luc**, 2002. – “Nécessité et justification”, *Revue Économique*, 53, 2, pp. 275-289.
- Boltanski Luc, Thévenot Laurent**, 1991. – *De la justification: les économies de la grandeur*, Paris, Gallimard.
- Borgatti Stephen et al.**, 1998. – “Network Measures of Social Capital”, *Connections*, 21, 2, pp. 27-36.
- Bourdieu Pierre**, 1980. – “Le capital social: notes provisoires”, *Actes de la Recherche en Sciences Sociales*, 31, pp. 2-3.
- Brousseau Éric, Glachant Jean-Michel**, 2000. – “Économie des contrats et renouvellements de l’analyse économique”, *Revue d’Économie Industrielle*, 92, pp. 23-50.
- Burt Ronald**, 1992. – *Structural Holes: the Social Structure of Competition*, Cambridge (Mas), Harvard University Press.
- Chellas Brian**, 1980. – *Modal Logic: an Introduction*, Cambridge, Cambridge University Press.
- Coase Ronald**, 1960. – “The Problem of Social Cost”, *Journal of Law and Economics*, october, pp. 1-44.
- Coleman James S.**, 1984. – “Introducing Social Structure into Economic Analysis”, *American Economic Review*, 74, 2, pp. 84-88.
- 1986. – “Micro Foundations and Macrosocial Theory” in **Siegwart Lindenberg, James S. Coleman, Stefan Nowak** (eds.), *Approaches to Social Theory*, New York, Russell Sage Foundation, pp. 345-363.
- 1987. – « Psychological Structure and Social Structure in Economic Models » in **Robin Hogarth, Melvin Reder** (eds.), *Rational Choice: the Contrast Between Economics and Psychology*, Chicago, The University of Chicago Press, pp. 181-185.

(42) The idea of a necessary link between the two conditions is of course at the core of Habermas’ work. See Boltanski’s innovative article (2002) on moral judgment (wherein the

two conditions are clearly combined) as a criterion for classifying social science research programs.

- 1988. – “Social Capital in the Creation of Human Capital”, *American Journal of Sociology*, 94, Sup., pp. S95-S120.
- 1990a. – *Foundations of Social Theory*, Cambridge (Mas), Belknap Press of Harvard University Press.
- 1990b. – “Norm-Generating Structures” in **Karen Cook, Margaret Levi** (eds.), *The Limits of Rationality*, Chicago, The University of Chicago Press, pp. 250-272.
- Corcuff Philippe**, 1995. – *Les nouvelles sociologies*, Paris, Nathan (Collection 128).
- De Munck Jean**, 1999. – *L’institution sociale de l’esprit*, Paris, Presses Universitaires de France (L’interrogation philosophique).
- Dworkin Ronald**, 1989. – “La complétude du droit” in **Paul Amselek, Christophe Grzegorzczak** (eds.), *Controverses autour de l’ontologie du droit*, Paris Presses Universitaires de France, pp. 127-136.
- Favereau Olivier**, 1995. – “L’économie des Conventions: métaphysique d’un programme de recherches en sciences sociales”, *Actuel Marx*, 18, pp. 173-181.
- 1997. – “L’incomplétude n’est pas le problème, c’est la solution” in **Bénédicté Reynaud** (éd.), *Les limites de la rationalité: les figures du collectif*, Paris, La Découverte, pp. 219-233.
- 1998. – “Notes sur la théorie de l’information à laquelle pourrait conduire l’économie des conventions” in **Pascal Petit**, *L’économie de l’information*, Paris, La Découverte, pp. 195-238.
- Favereau Olivier, Biencourt Olivier, Eymard-Duvernay François**, 2002. – “Where do Markets Come from? From (quality) Conventions!” in **Olivier Favereau, Emmanuel Lazega** (eds.), *Conventions and Structures in Economic Organization: Markets, Networks, and Hierarchies*, Cheltenham, Edward Elgar, pp. 213-252.
- Favereau Olivier, Picard Pierre**, 1996. – “L’approche économique des contrats: unité ou diversité”, *Sociologie du Travail*, 38, 4, pp. 441-464.
- Friedman Milton**, 1953. – “Methodology of Positive Economics” in *Essays in Positive Economics*, Chicago, The University of Chicago Press, pp. 3-43.
- Ganz Joan Safran**, 1971. – *Rules: a Systematic Study*, Paris, Mouton.
- Genard Jean-Louis**, 1999. – *La grammaire de la responsabilité*, Paris, Le Cerf.
- Haack Susan**, 1978. – *Philosophy of Logics*, Cambridge, Cambridge University Press.
- Hart Herbert**, 1976. – *Le concept de droit*, Bruxelles, Publications des facultés universitaires Saint Louis.
- Kreps David**, 1990. – “Corporate Culture and Economic Theory” in **James Alt, Kenneth Shepsle** (eds.), *Perspectives on Positive Political Economy*, Cambridge, Cambridge University Press, pp. 90-143.
- Lazega Emmanuel, Favereau Olivier**, 2002. – *Conventions and Structures in Economic Organizations: Markets, Networks, and Hierarchies*, Cheltenham, Edward Elgar.
- Livet Pierre, Ogien Ruwen**, 2000. – *L’enquête ontologique: du mode d’existence des objets sociaux*, Paris, EHESS (Raisons pratiques, 11).
- Majewski Stephen**, 1990. – “An Alternative Approach to the Generation and Maintenance of Norms” in **Karen Cook, Margaret Levi** (eds.), *The Limits of Rationality*, Chicago, The University of Chicago Press, pp. 273-281.
- Malherbe Jean-François**, 1981. – *Épistémologies anglo-saxonnes*, Namur, Presses Universitaires de Namur.
- Parrochia Daniel**, 1992. – *Qu’est-ce que penser/calculer?* Paris, Vrin.
- Piore Michaël**, 2002. – “Economics and Sociology”, *Revue Économique*, 53, 2, pp. 291-300.
- Popper Karl**, 1963. – *Conjectures and Refutations*, London, Routledge.
- 1979. – *Objective Knowledge*, Oxford, Clarendon Press.
- Quine Willard Van Orman**, 1961. – *From a Logical Point of View*, New York, Harper and Row.
- Ricœur Paul**, 1986. – *Du texte à l’action: essais d’herméneutique II*, Paris, Le Seuil.
- Searle John**, 1996. – *The Social Construction of Reality*, London, Penguin Books.

- Stalnaker Robert**, 1999. – *Context and Content: Essays on Intentionality in Speech and Thought*, Oxford, Oxford University Press.
- Thévenon Olivier**, 2003. – *Les relations emploi-famille en Europe*, Thèse pour le doctorat de sciences économiques, Nanterre, Université Paris X-Nanterre.
- Tversky Amos, Kahneman Daniel**, 1986. – “Rational Choice and the Framing of Decisions”, *Journal of Business*, 59, 4, pp. 67-94.
- Ullmann-Margalit Edna**, 1977. – *The Emergence of Norms*, Oxford, Clarendon Press.
- Vax Louis**, 1982. – *Lexique de logique*, Paris, Presses Universitaires de France.
- White Harrison C.**, 1992. – *Identity and Control: a Structural Theory of Social Action*, Princeton, Princeton University Press.
- 1995. – “Passages réticulaires, acteurs et grammaire de la domination”, *Revue Française de Sociologie*, 36, 4, pp. 705-724.
- Wrong Dennis**, 1961. – “The Over-Socialized Conception of Man in Modern Sociology”, *American Sociological Review*, 26, pp. 183-193.