

Raymond Boudon: A review*

Ángeles Lizón Ramón

Universidad Nacional Autónoma de México. Centro de Estudios Básicos en Teoría Social
Universitat Autònoma de Barcelona. Department of Sociology. Currently retired.
angeles.lizon@uab.cat



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Abstract

A brief retrospective on Boudon's academic contribution through the three major stages of his academic career (path regression models, game theoretical mechanisms and subjective rationality) allows one to retain as his major contribution the proposal of theory construction by means of causal intentional mechanisms based on models of strategic decision-making. Recurrent structures of cogent systems of preferences formalized in game theoretical language seemed to offer him a suitable way to characterize some of the main or more significant macro-social effects in terms of micro-decisions taken by individual intentional agents.

Keywords: game theory and strategic analysis; rational choice theory; decision-making mechanisms; game theory analytical tools; methodological individualism; explanation by mechanisms and theory construction; subjective or cognitive rationality.

Resumen. *Raymond Boudon: una retrospectiva*

Atendiendo a los tres estadios centrales de su carrera (modelos de regresión y análisis de sendero, modelos de juegos de estrategia y racionalidad subjetiva), esta breve retrospectiva sobre Raymond Boudon pretende señalar como su mayor contribución a la sociología de la segunda mitad del siglo xx la propuesta de construcción de teorías de mecanismo intencional. Formalizadas en lenguaje de juegos de estrategia, un significativo número de estructuras recurrentes de preferencias le proporcionaron una forma innovadora de caracterizar efectos macrosociales significativos en términos de microdecisiones de agentes intencionales.

Palabras clave: teoría de juegos y análisis estratégico; teoría de la elección racional; mecanismos de toma de decisiones; herramientas analíticas de teoría de juegos; individualismo metodológico; explicación por mecanismos y construcción de teoría; racionalidad subjetiva o cognitiva.

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Summary

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1. Introduction

If generating social mechanisms as a strategy for theory building is a useful tool, then there is no doubt that the work of the French sociologist Raymond Boudon has been fundamental for the development of modern sociological theory. He was, in fact, a prime example of applying this strategy to complex social phenomena and at the time represented a major chapter in the history of contemporary analytical sociology.

As expressed in his constant arguments supporting these possibilities of explanation through mechanisms, one outstanding feature of Boudon's academic career was his persistent determination to actively maintain both the applied and theoretical requirements of sociology, and his tenacious pursuit of an empirical and scientific dimension for the discipline. Since his early training in the *École Normale's* tradition, he always showed a strong aversion to merely rhetorical, demagogic or manipulative discourse, instead, "admiring and emulating the objectivity and clarity of men of science" (Boudon, 1996a: 77). It was probably this same critical spirit which led him to Columbia University where, for a short time, he worked with Paul Lazarsfeld who he already knew through the publication of *The Language of Social Research* (1955). From this point on, regression analysis, secondary analysis and text analysis became a part of his academic and professional training, and continued to be a permanent feature of his work.

Fluent both in English and German thanks to his work at the universities of Columbia and Freiburg, from very early on in his academic life he was in direct contact with these two traditions and assimilated their most salient features. From the Anglo-Saxon empirical school he learned methodological rigour and became interested in regression techniques, statistical control and path analysis. Mindful of the limited or scarce possibilities of these statistical procedures as a means to serious causal analysis, he promptly embraced Lazarsfeld's claim in favour of non-statistic or theoretical assumptions. Following then Herbert Simon's leading work on asymmetry and causal concepts, he saw in the introduction of intentional mechanisms a secure way to overcome shortcomings widely spread in the standard statistical sociological research (Lizón, 2006). From the German sociological school, in particular from Max Weber, he took the basic notion of an intentional explanation that elicits the motives or reasons for an action as principles of meaning as well as causes of human agency. Accordingly then, throughout the different stages of his own intellectual and academic career, Boudon shaped his own

research programme that came to us as a curious intersection between these two major traditions.

One of the most impressive aspects of his work was the tenacity with which he came to illustrate and exemplify this strategy of explanation through social mechanisms in a wide range of areas. Attending either to simple mechanisms of cost-benefit (Boudon, 1973), systems of interaction with interdependent decisions (Boudon, 1979a), or a more lax notion of subjective or cognitive rationality (1992, 1996b) which he promoted as more in accordance with the principles of Weberian sociology of action (Boudon, 2003, 2006), the most outstanding result of his work was his capacity to integrate and articulate numerous macro-effects or social results within the theoretical framework of rational action.

Regarding his contributions to analytical sociology in general, one could discern at least three clearly defined moments or stages (Hamlin, 2002). In the first, Boudon (1965, 1967, 1968) mainly focused on questions regarding empirical methodology, factorial analysis, and path models using regression. From here onwards, the generation of models as a strategy for interpreting statistical structures (Boudon, 1979b) placed him in the wake of Lazarsfeld-Merton and Simon-Duncan's thesis of theoretical models to interpret statistical structures. This particular course was to bring him in contact with the pioneering studies of unconventional economists such as Albert Hirschman, Thomas Schelling and Mancur Olson, all of them deeply influenced by Herbert Simon's "*Models of Men*" and his notion of 'satisficing' or bounded rationality.

By the end of the 1970s, Boudon had arrived at a conception of social science in general, and of sociology in particular, which, to a large degree, he shared with the then young Norwegian philosopher Jon Elster (1978). Although working along independent lines, they both presented similar programmes, mainly built on an intentional behaviour model linked to the methodological individualism of rational choice explanatory thesis, and supported by game theory analytical tools. In this central stage of his work, Boudon (1977, 1979a) focused on the analysis of interactive social patterns, producing an indisputable accomplishment regarding his strategy for explaining macro or social phenomena by means of intentional interdependent decision-making mechanisms.

Even though he was familiar with the analytical tools of rational decision and game theories, from the very outset of his work one can appreciate his critical distance from the prevailing economic model. In this respect, he had particularly strong reservations regarding the position of the Chicago School (Gary Becker and James Coleman) or any claims of 'economic imperialism'. In *La Logique du social*, Boudon (1979a)¹ explicitly set out an alternative version of *homo sociologicus* that, by necessity, required the inclusion of "more complex" assumptions and a conception of an autonomous agent "better adapted to sociological thinking". With this, he clearly aimed to go far beyond the

1. Quotations are from the Spanish translation, Madrid, Rialp, 1980.

standard *homo economicus*' monist set of motivations, expressively centred on the agent's self interest and utility expectations. His analytical model, a peculiar form of 'methodological intentionalism' and 'methodological rationalism' (Van Parijs, 1990: 48), gained theoretical credibility thanks to his major contributions and achievements, reconstructing major examples from the sociological tradition in a continued effort to interpret unintentional lateral macro-effects in terms of micro-processes or intentional mechanisms (Boudon 1979a). In some way then, his work became one of the most effective and useful responses to Merton's long unattended claim concerning the possibilities of linking research and theory in sociological work.

2. Boudon's analytical proposal

By arguing for a change of paradigm, Boudon attempted to achieve an enriched version of intentional explanation as the ultimate aim of any sound sociological analysis. His programme was based on the thesis that, in order to explain any social phenomenon, one has to start from the actions-decisions of intentional agents (a clear preference for methodological individualism) confined to interactive systems (his predilection for strategic interdependent decision making). With this programme in mind, he tried to distance himself from the sociology of social causes (Durheim's 'social facts'), while leaning towards models of intentional interdependent decision (a neo-Weberian approach).

While distancing himself from the passive *homo sociologicus* as the result of social determinisms (Parsons, 1937) or social roles (Dahrendorff, 1958), his essentially interactionist notion of sociology also brought him into conflict with the standard notion of 'parametric rationality'. Thus, his new proposal ended up being conceived as a kind of intermediate position between diametrically opposed options, and would culminate in his own vision of an active *homo sociologicus* as the focal point of his analytical and theoretical proposal (*op.cit.*: 223-241).

Within this paradigm, social phenomena are no longer seen as mere reflections of society and culture, but rather as the result of the human capacity to reason and decide. Consequently, the social facts are to be interpreted as the manifest or latent result of actions and decisions of intentional agents that interact in socially indexed contexts. Faithful to the Weberian tradition closely linked to the notion of autonomous social agents, the proximity to the theory of decision making and games seemed particularly suited to his aims. This did not necessarily imply that he accepted the assumptions of the economic model as is, and its view of human emotions, motivation and behaviour. Far from adopting the view of social agents as mere utility maximizers, Boudon attempted to describe them by means of a complex set of preferences activated throughout the decision-making process within specific strategic, normative and cultural contexts. This was how his version of the *homo sociologicus* came to anticipate important corrections and additions to the standard economic model. According to him, perhaps the main differences between both concep-

tions are that, in the former, the agent is taken as being rational in the strict sense of ‘objective’ rationality,² while in the latter this is only the case in a peculiar meaning of limited or ‘subjective’ rationality (Boudon, 2003).

In fact, the rational behaviour of individuals is a far cry from being the behaviour of a utility maximizer and cannot be automatically reduced to the standards of economic rationality. Leaving aside questions related to the natural limitations of human cognitive and perceptual abilities (Boudon, 1986a, 1990), within a given interactive context the individual may also find his/her elective preferences influenced by the decisions of others; and, more definitively so, by some social basic norms and the inertia of beliefs and values that provide a sort of ‘background’ that, by nature, influence them (Searle, 1995, Bourdieu, 1980). Thus, Boudon’s final proposal came to be a hypothesis for rational behaviour that tended to be a good deal more lax and wide ranging than in the prevailing economic model.

Starting from the premise that the motives (or reasons) behind actions make them ‘intelligible’ and ‘explain’ them, in a true Weberian sense, he incorporated into his programme the unavoidable interpretative or subjective moment of the “motives that lead to action”, yet not renouncing the also unavoidable need to go beyond merely understanding and describing the evidence in question. His approach becomes particularly interesting if one takes into account that, in certain areas, particularly in post-modern sociology, there has been a tendency to substitute any attempt to explain for merely interpreting social phenomena³. Clearly, for Boudon the art of interpreting did not grant the sociologist of the observance of the scientific requirements regarding explanation. The peculiarity here is the fact that action constitutes its own category of facts (Boudon, 1979a: 239) and, consequently, he made use of the empathic assumption not only as a criterion applied to the individual to indicate the reasons that ‘justify’ his/her actions, but, also, as a principle for explaining them. Thus, motives or reasons contribute to an inevitable interpretative moment, and at the same time endow the action with its own explanatory principle (1979a: 237-241, 1992: 31).

It is perhaps this demand for explanation which constitutes the most distinctive feature of Boudon’s ‘neo-Weberian interactionism’, which he used to definitively distance himself from the old prejudices of operationalists and behaviourists and their systematic exclusion of mental states. However, the same demands also allowed him to take distance from the non-causalist hermeneutic versions, interpretations equally founded on understanding or *Verstehen*, but only in a narrow Diltheian sense, as regarding only subjective intentions or meanings. Rather than the motives which specific actors attribute to equally

2. In an ideal competitive market, individuals are believed to be fully informed and all-knowing in the sense that they know the only pertinent information about the prices. Since the agent knows all he needs to know, their knowledge is taken to be “objective”.
3. To a large degree, “due to the predominance of this kind of interpretive discourse, sociological theory appears to carry less and less weight in empirical research.” (Boudon, 1998: 127).

specific actions (as found in some merely descriptive ethno-methodological exercises), Boudon's concern was clearly both actionalist and indisputably explanatory and theoretical.

3. The appeal of game theory

While game theory hardly had any immediate impact on the empirical theory of action followed by the Columbia school, Boudon found himself decisively influenced by the logic of games. Paul Lazarsfeld was who introduced these mathematical tools as part of the on-going training of the members of his *Bureau of Applied Social Research*. Though his central aim was to improve their formal skills, judging by the results, von Neuman and Morgenstern's theses did not seem to have any substantial influence on most of them; although one must underline that the lucid essay by Luce and Raiffa (1957) on strategic games came out of these seminars. Merton did not mention this possibility (in his successive editions of *Theory and Social Structure*) nor did Coleman (the one member of this group who was closest to the rational choice models) embrace matrix games in any significant way. Perhaps the main achievement of Lazarsfeld's efforts was to familiarize those fellow sociologists, completely alien to the Weberian tradition, with the idea of an explanation based on human agency. Following the logic of interdependent decision frameworks, they were exposed to alternative hypotheses on human behaviour which could be used to substitute their empirical programme focused on *ad hoc* psychological variables (as in Stouffer's epigones), or based on rudimentary functional mechanisms (following Merton). In stark contrast, a very young Boudon clearly saw the possibilities offered by the mathematical language of games to provide a causal dimension hitherto unknown in sociological statistical practice. In fact, its interactive models seemed designed to offer social research the possibility of integrating causal reasoning into the analysis of the social interaction of autonomous decision-makers.

Lacking a language able to express cause in an efficient way, it is only natural that statistics did not encourage the idea of a strictly explicative empirical sociology (Lizón, 2006). Nevertheless, this would all change radically with the introduction of the language of games. Leaving aside the constitutive problems that have prevented this applied mathematics from being fully developed, matrix games decisively broke down the obstacles to causal thinking imposed by the symmetry of statistical correlation. It finally allowed for formally posing a basic causal reasoning in matters of social theory and social research (Simon, 1964).

Given that Boudon always stressed methodological issues, it comes as no surprise that he placed emphasis on the use of different matrix games, as they provided him with excellent tools to establish causal grounds for some general structures of human interaction. These mathematical structures allowed him to do so within a logic that presented the social facts as lateral results, often not intended, or even contradictory to the intentional actions of intentional

interacting agents. Hence, in stark contrast to many of his colleagues, he was fully convinced that, by learning to identify relevant structures of preferences in crucial matrix games, and using them properly in tasks of description and analysis, sociologists could make a solid contribution to the understanding of interesting social processes.

In this way, game theory offered him a formal and analytical framework in which the 'rational', 'consistent', 'non-contradictory', etc. came to be defined in terms of interdependent decisions within strategic interaction systems. This approach would finally lead him to integrate Popper's former analysis of the logic of the situation and the interdependent decision model into a basic scheme (Boudon, 1979a); a reformulation that also allowed him to associate this decisional stance with the idea of composition effects or lateral social results, now understood in terms of intentional reasons or causes. In merging these ideas, he found a general logic that could shed light on the behaviour of social actors and, furthermore, do so from a formal framework closely tailored to real forms of social interaction.

An immediate consequence of rational strategic behaviour in game theoretical terms is its essential interactive or social character. In fact, in this particular mathematical language, rationality of choice comes to be described in relation to a context of interaction and in strict dependence on the type of interactive system in which the decision is made. Effectively, this is a formal modality of interdependent decisions that accounts for maximization problems and strategic equilibrium within systems in which the decision of some individuals has a decisive influence on the decision of others. It is probably because of this that Boudon ended up stating that "since it is unrealistic to try and explain a social phenomenon outside an interactionist model [...] these systems of interdependence are of particular importance for sociological analysis" (1979a: 129).

Once one adopts the framework of rational decision and game analysis and begins to experiment with the various matrix games, one of the most surprising outcomes is the potential wealth of its formal tools. In fact, they can simulate a wide range of interdependent relations, in which central notions such as 'risk', 'agreement', 'mediation', 'coalition' or 'social contract', etc. come to identify different critical structures of preferences, which describe a wide frame of empirical arrangements of great interest to social research. The basic utility of these formal tools is commonly associated with the fact that, "rather than a theory in commonly understood terms", the logic of interdependent decision appears to refer to "an indispensable natural system for understanding human interaction" (Elster, 1989: 36)⁴. Although it has infinite mathematical possibilities (Schelling, 1984), social scientists should only be concerned with identifying a finite number of game matrices that seem to be particularly pertinent to questions that directly concern them.

4. Quotation is from the Spanish translation, Barcelona, Gedisa, 1991.

4. The meaning of methodological individualism in Boudon's sociology

Along with the rationality assumption, the explanatory principle of methodological individualism constitutes for Boudon (1992: 26-31) the other mainstay of the sociology of action. In a strictly Weberian sense, methodological individualism for him is equivalent to the assumption that social phenomena must be explained as the result of individual actions, actions which, in turn, have to be explained in terms of those intentional stances which guide the individual agents and cause them to undertake them.

In such a case, human actions are to be understood as the set of behaviours motivated by 'significant' mental states responding to 'expressed' motives or reasons. Its central relevance is naturally tied to humans' basic capacity for empathic understanding; an innate ability that allows us to 'look inside' and understand the reasons for our actions, and relate to others by understanding the motives behind theirs. It is because of this sort of human endowment as natural psychologists (Humphrey, 1986) that the action comes to constitute the core of any sound analysis and explanation of human affairs. One must not forget that this insight was precisely that which provided Weber with the definitive argument to award action a privileged position in scientific social explanations. With this it was also implied the consequent need to endow the social sciences with a character that was not only intentional, but also, intrinsically interpretive.

Closely linked to the Weberian tradition, Boudon continuously underlined the primacy of intentional regularities. The analytical focus of sociology must be on autonomous individuals capable of non-regulated decision making: "The causality relation that is observed between the parameters of the interaction system and the behaviour of the actors is only intelligible if seen in terms of the behaviour of actors endowed with autonomy" (1979a: 35-36). So, as a methodological rule, the sociologist must adopt the consideration of individuals or agents as no longer "left to their fate in a social vacuum" (Boudon, 1992: 28), but instead included in interactive systems, where the intentional actions come to be "the [true] logical atoms of analysis" (Boudon, 1979a: 63).

All of this is in clear contrast to Durkheim's collectivist tradition and his proposal for structural states as being responsible for social aggregates or 'social facts'. Adopting a completely opposed view, Boudon systematically argued in favour of the idea that any correctly established social regularity is to be understood as the result of intentional facts, that is, in terms of human actions and human interactions (Boudon, 1986b). Whether the suicide rate remains stable or not in the face of different statistical controls – as argued by Durkheim (1897) – in the end it is individuals who in fact commit suicide and they do so in accordance with 'their reasons' (Douglas, 1967). This, if any, is the exact meaning Boudon gives to Coleman's idea of the intentional explanation as a 'final explanation' or explanation with proximate mechanisms and distal causes.

To define social facts from the perspective of game analysis does not only mean presenting them as the result of individual intentional actions, but also

assuming that these actions are shaped within authentic systems of interdependent decision making (Bunge, 1999: 30)⁵. On this matter, his proposal also ended up distancing itself from the standard methodological individualism of parametric rationality, since he clearly opted for a notion of strategic rationality that he believed adapted better to sociological analysis. In this way, more than a mere analytical tool, games end up making a kind of ontological claim. In the end, one would have a theory that prescribes how rational agents behave in contexts of interdependence, which is the hypothesis behind Boudon's (1979a) own interactionist paradigm. Thereafter, interactive systems came to be seen as the basic molecule of social analysis; in fact, they are the interdependent decision systems that incorporate the intentional actions of decision makers.

5. The question of ontological atomism

When it comes to methodological individualism and ontological atomism, Boudon appears to have fallen victim to a certain degree of confusion. On the one hand, he readily acknowledged the intrinsically interactive or social nature of agents as strategic decision makers. On the other, however, he did not consider it necessary to revise the ontological assumptions which have traditionally gone hand in hand with the explanatory thesis of the methodological individualism of rational choice. In the end, it is not clear what he really meant when he stated that the principle of methodological individualism, “does not imply [...] a perception of society as a juxtaposition of ‘*solitudes calculatrices*’. *It does not convey an atomist image, but rather an interactionist image of society, which is clearly very different*” (1992: 28, emphasis added). In effect, we do not really know if, according to Boudon, we are social because we interact, or, from a more profound and essential perspective, we tend to interact precisely because *we are social*. What is argued in this last case is that human distinctive capacities – centrally our capacity for thought and decision – depend in a “non-causal but constitutive way” on the enjoyment of social relationships (Pettit, 1993),⁶ and perhaps require being more attentive to our evolutionary make up (Lizón and Masjuan in press).

This matter appears to merit attention, even if only to rule it out in a solvent way. Since Boudon (1986a) considers methodological individualism the “fruit of a rationalist epistemology” that “only has a methodological status”, he believes that the ontological questions linked to this explanatory principle must be postponed or ignored as “naïve” and “redundant” issues that “lead nowhere”. He is so decidedly in favour of the explanatory principle of methodological individualism that he overlooks the fact that this explanatory thesis

5. Quotation is from the Spanish translation, México, Ediciones EDAF, 2000.

6. This final interpretation would effectively avoid the Hobbesian idea of a pre-social mind; a topic that has now taken on interest not only in scientific circles that sustain a biological and evolutionary approach, but also in metaphysics and philosophy of the mind-intention where it concerns how significant people's relationships are in their essential constitution as subjects and agents.

is not bound *a priori* by any specific ontological claim regarding the nature of the human mind and human subjects. In effect, methodological individualism does not constitute a uniform doctrine and, certainly, has no given prior commitment to any claims concerning the nature of the mind or the content of the mental or intentional states that motivate individuals (Udehn, 2002).

As can be easily found in any dictionary of philosophy, the term ‘individualism’ designates a doctrine according to which the individual constitutes the basis of all structural regularities or social law. Nevertheless, given the elementary meaning of the ‘individual’ as an ‘atom’ or indivisible unit, individualism has always been concerned with at least two distinct and different conceptions. On the one hand, there is the definition of the individual in negative terms, that is, simply in opposition to any other composed reality (society, community, the state, etc.). In contrast, the other tradition has opted to define the individual in positive terms as a ‘human individual’, that is, someone in possession of certain impregnable characteristics and essential capabilities that confers the individual a basic ontological possibility to interact socially with others.

Although in both cases the explanatory principle of individualism is opposed to methodological collectivism, the two approaches imply completely different ontological conceptions. One way of highlighting the difference between ontological atomism and methodological individualism would be then to clarify that, while the former definition assumes a complete reduction of sociology to pre-social Hobbesian psychology, the explanatory thesis of methodological individualism is also compatible with a richer idea of constitutive social – albeit non-causal – human individuals.

Given the significant differences in interpretation, one has to adopt a clear position on this matter, regardless of how open the issue may be. In any case, just resting on the assumption that the explanatory principle of methodological individualism “has no more basis than its efficacy” (Boudon, 1979a: 65) implies a considerable degree of oversight regarding deeply rooted philosophical and even biological questions. Therefore, by ignoring this issue, Boudon succeeded only in obscuring the meaning of his own proposal. Unless one is sensitive to the atomistic ontology underlying the standard thesis of the methodological individualism of rational election, it is not possible to avoid some of the pitfalls that he himself attributed to Hayek-Popper’s version (Boudon 1992: 28). Neither can one take for granted that the explanatory principle does not imply “conceiving society in terms of a juxtaposition of *solitudes calculatrices*” (*Ibidem.*) and, at the same time, attempt to offer an alternative image of a socially constitutive human mind by the mere fact of undersigning an interactionist scheme. At least not, as is the case here, if one wants to criticize in any depth or even go beyond the limitations of the economic model (Boudon, 1979a: 224). What is lacking is a more clearly thought out and well-informed reconsideration of the ontological assumptions underlying the explanatory principle of methodological individualism, which is essential to obtain a final fit of the central pieces of his theoretical bet. It is only in this way that he could offer more secure and solid arguments in favour of his *homo*

sociologicus, or at least more sound than by making loose statements against ontological atomism.

In fact, one of the immediate consequences of the axiomatic basis of neo-classical economics was precisely the exclusion of social and political motivations. Central notions to sociological analysis such as ‘altruism’, ‘solidarity’, ‘legitimacy’, and ‘social commitment’ are not included in its formalized model (Eisenstadt and Roniger, 1984). Yet it is precisely this set of economic monist motivations, and not anything else, which Boudon seems to criticize responding with the idea of a more complex social agent. If this is the case, he certainly cannot limit himself to adopting methodological individualism as a mere explanatory thesis with the idea of undermining or transcending the explanations based on social facts. He also needs to provide some ontological counterview that would be relevant for his idea of intentional active actors, basically autonomous individuals and yet ruled by, and integrated into, the historical structures or institutions of their time. By taking distance from Hayek and Popper’s economic atomism, he urgently needs a social ontology that, though still unsolved, was somehow prefigured in his early proposal of a neo-Weberian paradigm.

Boudon was a long way from dealing with this, but it is very much to his merit that he at least posed a question that sociology will have to resolve if his active *homo sociologicus* is to prove to be “alive and well” (Boudon, 1979a: 224).

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