

Are there many types of rationality?

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Abstract

This paper has three basic objectives. First, it summarizes the general theories of rationality that are currently available in the social sciences. Secondly, it describes the specificity of Boudon's approach to rationality in contrast to the previous ones. Finally, it suggests a few ways in which this approach can be enhanced and complemented in order to achieve a solid theory on the interpretation of human actions in a social world.

Keywords: Boudon; axiological rationality; cognitive rationality; ordinary rationality; explanation.

Resumen. *¿Existen muchos tipos de racionalidad?*

Este artículo tiene tres objetivos principales. En primer lugar, se ofrece una panorámica de las teorías de la racionalidad actualmente disponibles en ciencias sociales. En segundo lugar, se discute la especificidad de la aproximación de Boudon en contraste con las anteriores. Finalmente, se sugieren algunas vías a través de las cuales la aproximación puede ser mejorada y completada con la finalidad de alcanzar una teoría sólida de la interpretación de las acciones humanas en el mundo social.

Palabras clave: Boudon; racionalidad axiológica; racionalidad cognitiva; racionalidad ordinaria; explicación.

Summary

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1. Introduction

Raymond Boudon's contribution to social theory has two main dimensions. First, he has been a pioneer in the theorization of mechanisms that govern social reality and allow social explanations (Boudon, 1974). Second, he has been responsible for a broadening of the notion of rationality, beyond the one involved in the standard rational choice model (Boudon, 2007, 2009). The link between the two aspects is that mechanisms in social life necessarily involve individual actions, and that these actions can be to a certain extent interpreted in terms of rationality. This implies a reflection on the notion of rationality itself, and its characterization. It is part of the indispensable more general reflection on the process of understanding action in a social context. This is a central issue for social sciences: collecting or simulating data is only the first step; the second step is to explain social phenomena, and this always requires procedures for understanding behaviour.

Boudon's contribution to the theory of rationality has itself two main dimensions (Boudon, 2011): on one side, he has insisted that rationality should not be understood only as instrumental or utilitarian, but should also involve what he has named "cognitive" and "axiological" dimensions. The idea is that the standard rational choice model does not satisfactorily take into account these two essential aspects of action that are necessary to its interpretation. Therefore, the grammar of the interpretive work in social sciences requires the introduction of cognitive and axiological features I will describe further on in this paper. Second, although rationality has various dimensions (mainly, in his words, instrumental, utilitarian, cognitive and axiological), it is unified as a general structure of human behaviour and named as such as "ordinary rationality". He has described his theory of rationality as referring to this "ordinary rationality" beyond the various dimensions he had emphasized. This poses the problem of the link between the general idea of rationality and its various dimensions. What is the common element of rationality that allows us to speak of rationality when we introduce several types of rationality?

In this paper, I will try to:

- 1) Summarize the general theories of rationality that are currently available in the social sciences.
- 2) Describe the specificity of Boudon's approach to rationality in contrast to the previous ones.
- 3) Suggest a few ways by which this approach can be enhanced and completed in order to achieve a sound theory of the interpretation of human actions in a social world.

I will concentrate on a general approach to the idea of rationality which is rarely followed, oriented by the question of the justification of the very idea of rationality: when are we entitled to speak of rationality and why should we consider an action as a rational one? What is, at a meta level, the justification

of such an idea? In particular does it involve a normative dimension and, if this is the case, how is it articulated to the positive investigation of social science?

2. Various theories of rationality

There are five basic widespread notions of rationality in the social sciences (including Boudon's approach). They are classically linked to methodological individualism, since theories of rationality are theories of rational actions. All of them can be related, more or less clearly, to Popper's "problem-solving" notion (Popper, 1967).

The first one is to consider that individuals are rational whenever they act in an intentional way. The intentional decision to act corresponds to the reason someone has to act, for instance smoking for her pleasure, or not smoking in order to avoid health problems. This classical idea can be found in Weber.

An irrational behaviour would be then to act on the basis of non-intentional causes. For instance, Kahneman (2011) reports a study about parole judges observed in their decisions. In this example, individual judges tend to be more severe when they are hungrier: clearly in this case non-intentional and unconscious causes affect intentional decisions. The judges are not aware of the influence of those factors on their deliberate decisions. This means that intentional motives do not have the sole influence on individual decisions; however, in this example it is still intentional decisions that are at stake, partly determined by unconscious trends. It can be also the case that people will act in a manner that is opposed to their intentions, for instance when they smoke although they would prefer not to smoke.

Intentional action can clearly be linked to and dependent on psychological features or social norms. When we speak of reasons to act, these reasons can obviously include the acceptance of given social or cultural norms. Therefore, in this first meaning of intentionality, rationality does not give clear criteria for decisions that would lead towards specific kinds of choices, which would, for instance, be different from and maybe opposed to the acceptance of social norms. But it stresses the fact that in order to be rational, an intention of action must be the effective source of action: I decide to act according to my intention to act, whereas, when I am not rational, I act on the basis of causes that do not correspond to my intentions, either because they are opposed to my intentions, or because they overcome my intentions, or because I have no intentions at all. This has a problem-solving dimension since I must decide how to act given my situation (Shall I Smoke? Shall I not smoke given all the consequences I know about smoke?). Ideally, an individual decision is the "correct" decision one should take, according to one's situation, although the criteria of such correctness are not one-sided and do not lead to interpersonally valid norms of decision. The emphasis is not so much on the criteria of the decision, but on the fact that the intention corresponds to a deliberate choice. Therefore, a choice is often based on subjective motives. This is a very weak sense of rationality, although an important preliminary one.

The second notion of rationality is linked to the ideal norm of consistency or transitivity of choices. The rationality does not stem from the contents of individual choices as such, but just from the fact that individuals are consistent in the ordering of their subjective preferences. Preferences are clearly not considered to be rational in this case. It is the official position of neo-classical economics, where rationality does not involve any kind of “right” decision, but only the fact that people do not take inconsistent decisions (Sen, 1977). Irrationality here would correspond to inconsistent choices of the kind, again, described by Kahneman and Tversky (2000), or Elster (2010). Here again, the transitivity of choices implies that the contents of the choice are not part of the rational dimension, and therefore depend on other dimensions (either subjective, psychological or social). Preferences are considered to be outside the realm of rationality, sometimes characterized as irrational, and sometimes as “a-rational”. The criterion of rationality is here only consistency. Although limited in scope, it clearly has a normative aspect, which poses two questions: Why should consistency be assimilated to rationality, that is, why does rationality involve consistency? Alternatively, is it conceivable for someone to have reasons not to be consistent in her preferences? This poses the problem of the reversal of preferences, and of the localization of consistency in time: should an apparently inconsistent choice be interpreted as irrational, or as an adaptation of choices given the possible evolution in time of given preferences? This is the position defended by Elster, who does not consider that reversal of preferences in time should be considered as irrational. It is a difficult topic: on the one hand, it is clear that in sociology the idea of stable preferences relatively independent of time change is useless, and should not be the default solution that would be highlighted only for modelling reasons. We have to take into account, in a realistic way, all the changes of preferences that can be observed, and there is moreover room for a rational interpretation of change of preferences. On the other hand, we cannot escape the issue of consistency of choices (for example in polls analysis), although successive choices always intervene in definite periods of time.

The third notion of rationality links it to an instrumental dimension of action, where an actor chooses the adequate means to reach an end. The idea of rationality derives here from an ability to select the *correct* means to achieve an end, which requires that the normative notion of correctness is here implied, whereas in the previous notion of rationality, the normativity of rationality was located in consistency. It should be noted that, although instrumental rationality is widely associated with standard economics, it can be separated from it from two opposed points of view: first, as was noted by Weber, instrumental action does not necessarily imply any kind of economic motives. Second, the transitivity of preferences, which is the core of neo-classical formalization of economic action, does not in fact involve a notion of instrumental action. Here again, instrumental rationality presupposes and involves motives that can be related to a social dimension. However, the criteria of rationality are clear and rather univocal. Although this notion of instrumental rationality has

been defined by western philosophy and sociology in specific contexts, and has its own scientific history, it can in retrospect be applied to many human conducts in the most diverse cultural settings. An important question in this respect is whether animal behaviour, which is often clearly instrumental, can be defined in terms of rationality on this basis (Turner and Maryanski, 2008). A more common challenge for such a theory of instrumental rationality is to interpret the behaviours that seemingly depart from its requirements: for instance magic rituals.

The fourth notion of rationality is clearly the most widespread in today's social sciences, although it suffers major ambiguities (Demeulenaere, 1996) and can be the subject of deep criticism. It is the idea that people act rationally whenever they efficiently pursue their self-interest (Coleman, 1990). This is a much different and narrower conception of rationality: it does not insist only on the deliberate choice of an end, nor on the means to achieve an end, nor on the consistency of the ends, but on the ends of action themselves, namely self-interest.

In this scenario there is, however, a deep hesitation between two alternatives (Demeulenaere, 2011): either the preferences are supposed to be the same for all the actors (like a typical preference for an increase in wealth), or they can be dissimilar (like smokers' or non-smokers' preferences). Consequently, it is not easy to interpret the notion of costs and benefits, since they can correspond to the same choices for a set of actors, or, conversely, to opposed choices; for instance, in the case of smokers and non-smokers who clearly do not have the same appreciation of costs and benefits regarding smoking. On the one hand, it seems clear that people do often have the same sense of costs and benefits and that it is relevant to interpret their actions in terms of maximizing benefits and reducing costs on the common basis of shared conceptions of advantages and disadvantages. On the other hand, they often do not agree on what is a cost, and what is a benefit, and in this case any reference to costs and benefits has no specific contents and only designates different choices and different subjective (or socially prescribed) evaluations of a situation. Saying that people maximize their benefit tends to be tautological, since any choice is by definition an attempt to maximize satisfaction. This problem is a fundamental one and is unresolved by the standard rational choice model which tends to assert at the same time that preferences are diverse, and to reason in terms of implicitly or explicitly unified costs and benefits: the two contentions are not consistent.

This theory is strongly normative since it reduces rationality to the choice of self-interest, that is, it considers that it is rational to select one's interest instead of, for instance, to adhere to a value or a social norm (and values or social norms should be interpreted in terms of self-interest). However, it can be argued that the theory is not normative at all (Homans, 1987), since it is just a description of a typical behaviour and an attempt to model the fact that people tend to maximize their self-interest, without any evaluative appreciation of that attitude. The rational choice model would be just a matter of action

modelling, devoid of any action evaluation. This position can be defended with good arguments. It would have as a consequence that the notion of rationality is here rather useless, and that its concept (with all its background) is not really part of the theory. The idea would only be that people typically tend to maximize their interest, without any consideration about the rationality of this conduct. The notion of rationality would be taken in a sense that is devoid of all its usual requirements. Therefore, it should be in fact better to avoid it because of its normative connotations.

However, this is implausible. Although the rational choice model can be reduced to a self-interest maximization modelling of action, it does in fact involve specific rationality considerations for two different and unequally acceptable reasons. One of them is indeed very disputable.

The first reason is the instrumental dimension that is involved in this characterization of action: people, when they pursue their self-interest, tend to select the appropriate means to reach their ends. This is the core idea that led Weber and Pareto to interpret economic actions in terms of rationality, and precisely in terms of instrumental rationality, whereas before them, for instance in Mill's theorization of economic action, no explicit reference to rationality was made. This assimilation of economic action to instrumental rationality can be challenged in return on two bases: first, it can be noticed that most often there is no availability of definite means to reach economic ends; second, there is no reason to exclude the fact that in pursuing economic ends people can sometimes use non-rational or irrational methods (like, for instance, feng shui beliefs). The connection of economic motives to adequate instrumental choices is not an obvious one. It has a normative side, since it is considered that, having economic motives, people *should* select the adequate means to reach them.

The second reason is more controversial: it has its roots in some type of positivist belief that asserts that it is rational for someone to pursue her interest. This derives from a negative proposition: belief in values cannot be rational, since they are not based on fact description. The positive proposition would be to assert that, by nature, people tend to pursue their interest (as opposed to cultural values) and this is why it is rational to adopt this conduct. Pareto was ambiguous about the interpretation of the status of interests: on the one side he maintained that any interest, as much as a value, does not belong to the logical side of action, since it cannot be based on the description of a fact. On the other hand, he suggests on several occasions that people who pursue their interests have so-called logical attitudes. At any rate, it has been since then commonly admitted that rationality involves the pursuit of interest, not just as an instrumental choice of the means to reach them, but also as the choice of interest itself as a rational end. For instance, in Parsons' theorization of action, when he refers to values, he refers to "non-rational" ends, as opposed to rational interests. Similarly, Elster (2009, 2010) refers to irrationality when people adopt attitudes that do not correspond to self-interest.

In sum, we have four different criteria for rationality:

- Intentionality, the idea of rationality being here that people have reasons to decide what they decide.
- Consistency, since it appears intuitively that people should not contradict themselves in formulating their choices.
- Adequacy of the choice of the means to reach an end, when a correct choice of means is in fact available, and since it would be ineffective to select the wrong means.
- The choice of interest, since it is a sound choice regarding human nature.

Clearly, the fourth notion does not provide the same self-evidence as the three previous ones, as I have just pointed out. A fifth notion of rationality is much rarer in social sciences, as a consequence of the influence of positivism: it extends the scope of rationality to the determination of somehow right choices that include not only correct beliefs but also normative deliberations about ends. Boudon has advocated the reintroduction in sociology of this classical meaning of rationality in philosophy. I will outline now his conception.

3. Boudon's theory of rationality

Boudon's main idea regarding the theory of rationality is that people have *good reasons* to do what they do, that is, not only reasons, but precisely good ones. Given their situation and given the information they have, they tend to do the somehow *right* choice that is available from their point of view. To introduce the notion of point of view is to consider that a good choice is often, in principle, attainable. However, people do not necessarily make this ideally good choice, but the one they do is the best from the point of view of their situation and information. When the notion of right choice is introduced (through the notion of "good reasons" to make a given choice) this can involve at the same time truly right choices, *per se* (given our capacities to justify a choice), and sometimes erroneous choices, but the latter appear to be the best ones given the situation of the actor and her point of view. This theory is rather similar to Popper's one, or Dray's one (1964), but Boudon's attempt was more explicitly intended to limit the scope of the predominant rational choice theory and to reintroduce a more specific treatment of the rationality of normative issues. It is different from Simon's theory of bounded rationality in his emphasis on *good* reasons.

Boudon's theory of rationality is based on two main critiques of other conceptions of rationality. One is addressed to the classical Humean theory. There is a debate about the exact significance of Hume's contention about rationality I will not discuss here. I will just mention that Hume's theorization is more complex and subtler than its caricature. Boudon develops his comments on the basis of two common interpretations of Hume's legacy:

- The fact/value dichotomy
- The restriction, given this dichotomy, of rationality to the choice of means, not to the choice of ends.

Hume's legacy has been influential in the social sciences, especially in economics, and it can be said to have partly led to the current rational choice model which associates an instrumental dimension regarding the choice of the means, and a so-called utilitarian one regarding the ends: people rationally pursue their self-interest. I have just indicated that those two dimensions are fundamentally different and that they should be separated in the conceptualization of the issue of rationality.

Boudon's critique regarding this tradition and this model has three main aspects, one about beliefs, one about the instrumental dimension, and one about the choice of norms. Regarding beliefs, Boudon has three main contentions. First, he introduces the idea that a cognitive dimension (and rationality) is necessary to interpret positive beliefs (for instance about magic) that are shared by people in given situations. Although Boudon says that cognitive rationality does not belong to the Humean theorization of rationality, we can reply that this is not the case: Hume clearly asserts that reason can select correct beliefs; in particular the choice of means to reach an end presupposes such beliefs. Naturally the word "cognitive" is a modern one, but the idea of a relevant positive belief based on an appropriate use of reason clearly belongs to Hume's legacy.

Regarding errors, Boudon has been critical of Kahneman's and Tversky's perspectives when they insist on the impact of biases in the formation of beliefs and decisions. Boudon criticizes their trend (although not an overwhelming one) to interpret such biases as causal ones, and consequently to characterize the behaviours that are dependent on such biases as irrational. Boudon has instead insisted on the reasons for which individuals endorse false beliefs, given their situation and information. He has pledged, following Weber, for a rationalistic interpretation of error instead of a causal and irrationalistic one. This is a major discussion for the philosophy of social sciences: the debate must clearly continue to go on; it is related to the link between psychology and the social sciences.

The most important topic Boudon has insisted on is that beliefs are also implied in matters about norms. This means that normative beliefs are implied in the adoption of norms as well as positive beliefs. Both depend on reasons: reasoning about norms and values does exist in everyday life. This line of argument is a clear rupture with Hume's or Pareto's tradition. Boudon has tried to convince that this theory of reasoning about values was on the contrary defended by Weber or Durkheim (Boudon, 1998, 2000), despite the common thinking that they did not do so. This particular historical point will not be discussed here. The main idea here is that people have systems of reasons about the values and norms they endorse, as much as they have systems of reasons about the positive beliefs they endorse. Therefore, it is irrelevant to separate the positive and the normative aspects, since they are both unified by the exist-

ence of beliefs and by the fact that those beliefs are supported by reasons people have, in their situation, to accept them. For instance, people support the death penalty (normative position) because they believe it is efficient. They can renounce it when they find out that it is not in fact efficient (positive belief).

Instrumental rationality appears in this perspective as only one aspect of having reasons to take a decision or to make a choice. Boudon, however, is critical of three dimensions commonly associated with the reduction of rationality to instrumental action. He does not so much insist, as Hume did, on the empirical evidence for the selection of the right means as a base for the idea of a rational selection. Instead, he describes instrumental action as the choice made by an actor of a definite action because of its consequences. In Weber's definition of *Zweckrationalität*, both aspects are present, and even a third one: the right choice of the means (supported by empirical evidence), the anticipation of consequences, and the comparison of the ends given those predictable consequences.

What Boudon has claimed is that people often behave not only on the basis of the consequences of their action (which he envisages as utilitarian ones), but on behalf of principles they endorse. Moreover, they do not behave only to fulfil their self-interest, but they obey to moral principles.

Two examples in this case are central: first the paradox of voting, second the prisoner's dilemma. Both have no solution on an instrumental rationality principle. In a large poll, people should not vote on an instrumental basis because their vote makes no difference. But they do vote. People should not cooperate in a prisoner's dilemma situation, because their interest leads them not to cooperate. However, they do cooperate. This is why the notion of axiological rationality is introduced.

Boudon's reference to axiological rationality is his most innovative contribution. The main idea is that it is possible to reason about values and norms, and that values and norms problems can have good solutions. Boudon distances himself from the rational choice model that would treat the adoption of norms either as a part of given irrational preferences, or as the result of a calculation of self-interest. Since there are reasons that are given by actors for their choices of values, it cannot be said to be just the manifestation of an irrational trend. Since people often endorse principles that do not correspond to their self-interest, it cannot be said that they adopt values and norms only when they suit their interest. They do not stem either from natural unconscious trends.

On the other hand, Boudon rejects a culturalist perspective that would reduce the adoption of norms and values to a consequence of various social and cultural settings, without any intrinsic justification. The idea is again that people believe in the values they adopt and are often able to give reasons for their beliefs. This is why Boudon contrasts his interpretation of Weber's axiological rationality with the one which is commonly held: axiological rationality does not just correspond to coherence with values, whatever their roots are; axiological rationality is instead a rational ability to reason about norms, and to adopt a behaviour that stems from this rational acceptance of norms.

For instance, people can understand that from a consequential point of view, they have no reason to vote in a large-scale poll, because one vote makes no difference. Despite this knowledge, they will vote because they understand, on the basis of rationality, that participation is important in order to respect the democratic principles they adhere to from the perspective of axiological rationality.

What then are the criteria that allow us to determine, rationally, the validity of normative principles? Boudon has mostly developed his theory as a comment on crucial examples. The good reasons are not unified in his presentation as a deductive body of propositions: they mostly arise from particular discussions of particular issues, which are not grounded in a few general assumptions. Instead, every single case is envisioned from its own properties.

However, it can be said that his reflection about the rationality of norms has led Boudon to stress three general principles. They clearly do not exhaust all the necessary elements that are present in reasoning about norms, but they constitute recurrent major ingredients (although very different in nature) of this reasoning.

The first one is the principle of human dignity, often referred to as a substantial overall source of normative beliefs. It seems to Boudon that this principle does not have to be justified as such, it has a kind of self-obviousness.

The second is the principle of impartiality theorized in Smith's impartial spectator. People have a more appropriate sense of the correct normative attitude when their own interest is not at stake.

The third is an evolutionary stance Boudon has increasingly introduced in his reflection about norms: new principles tend to arise, and are selected because of their strength and intrinsic appeal; for instance, the principles of the separation of powers. Once they are defined and applied, it becomes extremely difficult to challenge them. This leads to a rather optimistic and evolutionary theory of norms where better norms, in the long run, tend first to appear and then to replace inadequate ones. Boudon has repeatedly, for instance, described the death penalty as a more and more unacceptable sanction: because it is inefficient, because it is cruel, and because it makes any judicial error irreparable. Boudon thought that the death penalty would be progressively abolished, in particular in the United States of America. In his view, the theory of axiological rationality could allow us to make some specific predictions.

4. Towards an integrated theory of rationality

Boudon's theory of good reasons has major theoretical advantages. It is an attempt to bridge values and facts, positive beliefs and normative beliefs. It is an effort to link sophisticated intellectual investigations and ordinary thinking about norms and values. It is therefore a combination of philosophical investigation and of sociological explanation. It puts together normative considerations and empirical data. It relates correct beliefs and right norms to false beliefs and unjust practices in a common interpretation. It combines a

diversity of rationality aspects (cognitive, instrumental, utilitarian, axiological) in a unified perspective. It departs from a narrow naturalism that would not be sensitive to social variations and cultural diversity of norms, but it similarly rejects a simple culturalism that would not succeed in explaining the variation of norms on the basis of the change of situations and of the rational dimension of any belief. It integrates more diverse social particular situations to its framework than other theories of rationality. It leads us to abandon a naïve and intuitive sociological commentary on data by providing a more systematic guide to interpretation that takes into account the logic of formation of beliefs and decisions in various social situations and individual positions. In particular it gives all its strength to the idea that people do not hold beliefs or decide actions on the basis of only cultural or subjective grounds: their rationality is what allows us to interpret their formation.

However, Boudon's theory can be completed and enhanced in several dimensions. First, the advantage of the classical Humean criteria for rationality is that they are clear and undisputable: it is experience, or empirical evidence, that provides the elements for a correct belief about a fact (namely facts about the proper means to reach an end). We do not have the corresponding evidence to interpret as rational the choice of the various and opposing norms that govern social life. Boudon's theory tends first to assert that some norms are better than others. Their advantage stems from particular reasoning, which refers to various principles. He then tries to demonstrate that the better norms tend to prevail and are widely shared by people. But he does not really display clear criteria to demonstrate that the choice of those norms is rational. The problem of the reference to good reasons is that in some sense everyone has good reasons to do what he does, but that does not necessarily provide a framework for a unified theory of behaviour. Boudon tries to reach this unified position, but it is not sure he always succeeds in doing that.

We should therefore reconsider the elements that can justify the idea of rationality. The strength of Boudon's theory's can be seen partly as a weakness. The strength is the pluralistic, supple, and open dimension of rationality, sensitive to the variation of individual and social situations. The consequence of this, however, is the risk of having little difference between reasons (which depend on various subjective and cultural motives) and good reasons (truly rational), and therefore no clear criterion for discriminating right decisions among competing ones.

To partly overcome this problem, I have suggested (Demeulenaere, 2003) that we should introduce a reflection that provides us with the general basis for defining something as rational. Something is said to be rational when it obeys a norm that drives the decision; a norm that is not subjective or cultural. For instance, following Weber (1978), to say that two plus two equals four corresponds to a *correct* choice that is neither subjective nor cultural. It corresponds to a norm of correctness that "forces us" to admit that two plus two equals four. If everything is subjective, or cultural, there is no room for the idea of rationality, and no idea of the correctness of this sort. Similarly, an adequate

belief regarding a fact is something, based on a norm of correctness (Putnam, 2002), which should not be seen, if it is to be rational, as a subjective belief or a cultural attitude. We are complied by the facts, in one manner or another, to adopt beliefs that are congruent with them (even if errors are common). Here again, any correct belief is dependent on a norm of correctness, which is not subjective or cultural. Naturally, it is possible to introduce the notion of subjective rationality the way Boudon (1989) has done. It allows us to interpret, the way Weber had previously conceived them, typical errors that are rational in the sense that given the information someone has, and given the norms of rationality, she could not achieve the exact correct solution to a problem. The one reached was, however, the best option in her situation. It has a subjective dimension, although based on non-subjective norms.

But how should we characterize these norms and where do they come from? What is the common element between intentionality, consistency of choices, choice of adequate means, and axiological rationality that entitle us to speak of rationality? I will not develop all this in this paper, but I will suggest two elements of reflection I have developed elsewhere (Demeulenaere, 2003):

- Rational norms derive from intrinsic features of action and reflection. Thinking and acting have their own norms. Consistency of choices, for instance, derives from the very notion of making a choice, or of ordering preferences. The idea of rationality derives from the features of action. Similarly, when we describe a fact, the very notion of description implies that the description should be correct, and therefore poses its conditions for correctness.

- Because of these intrinsic features of action and reflection, which are constitutive of human behaviour, rationality norms are not subjective nor cultural, although they can be variously defined and more or less enhanced in various social contexts. The scope of the idea of rationality is to define interpersonally valid norms that are not reducible to cultural various settings. Their existence allows us to interpret particular behaviours that are inevitably concerned by these norms.

- On the basis of those rationality norms, particular social norms, although normative, can correspond to rational solutions to problems. For instance, I cannot convince someone to accept a norm that is not in her interest, just by saying that it is in my own interest. It typically does not work from the point of view of the meaning of the process of justification of a social norm. The other person has to find an interest in the norm, or to find a more general reason to accept it, which cannot be only *my* own interest. This typically will not work (except if the person has a particular interest of her own in my interest). This is a point that had been made by Durkheim and Pareto. Therefore any social norm that is intended to be legitimate must inevitably take into account this constraint on any process of justification. So, any attempt to find legitimate social norms is constrained by this feature of any process of legitimization. The solution to this problem evolves given other social parameters. The rational choice is here to find solutions to this problem that are consistent with the general features of the process of legitimization.

Once they are conceived in particular social settings, the mechanisms by which these norms are diffused should be described more precisely. Boudon was inclined to put the emphasis on the correspondence between correct norms, or better norms (in his view) and a wide acceptance of those norms. Situations where unjust norms are widely accepted or where just norms are not diffused do naturally exist. For sure, he has many elements in his theory to explain such situations. But he did not really pay attention to the diffusion mechanisms that lead from one situation to another.

Neither has Boudon specifically considered the influence of social groups on the formation of individual beliefs. People do not form their beliefs alone: when, for instance, they believe that there are massive destruction weapons in Iraq, they believe such a thing because they are part of a group where dissent is difficult and where everyone's certitude is reinforced by that of the others. This is not incompatible with a theory of rational behaviour, but reasons are shared, and the fact that they are has a major influence on the formation of a singular belief. It is particularly true through educational processes.

Finally, the role of emotions in the formation of beliefs, that is, the fact that beliefs are sensitive to desire (Elster, 2000, 2010), should be more precisely described. For sure, this does not mean that there are no rational beliefs. When someone adopts a belief she generally has more than just a desire to accept it; there must be some cognitive elements that give credit to the belief. But it is important to note that rationality by itself is supported by emotions (Damasio, 1999), and that other emotions tend to interfere with its verdicts.

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