Rational and moral action: a critical survey of rational choice theory

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CHAPTER II

INTENTIONAL ACTION AND SITUATIONAL LOGIC

1. Introduction

The most characteristic feature of neo-classical economics is the attempt to derive all economic behavior from the actions of individuals seeking to maximize their utility, subject to constraints. There are two theories of rational, choice to which this description applies: the Belief-Desire model, and Popper’s model of Situational Analysis or Situational Logic.

Something peculiar surrounds these theories: they exist in strong isolation from each other. It is noteworthy that theorists of both approaches do not refer to each other. Hands observed, “(...) these literatures seem to exist in hermetic (supercilious?) isolation from each other.” (Hands, 2001, 336, note 44) 26 This is even more remarkable when it should be

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26 To give some examples: in a well-known introduction of rational choice theory (Hargreaves Heap et. all. 1992) there is no single reference to the model of situational logic; neither does Hausman refer to it when he
the case, as Hands believes it is, that the model of Belief and Desire and the model of Situational Logic are essentially similar. Caldwell even believes that these two variants are in fact one and the same, for he writes “Situational logic is a powerful method which has been applied fruitfully to a host of social science problems (...). More speculatively, one might imagine the rationality principle as playing the role of a central organizing metaphor for a variety of social sciences.” (Caldwell, 1991, 15). He then refers to Elster’s outline of rational choice theory (which is the model of Belief and Desire) and to Kahneman and Tverky’s prospect theory, in which situational logic does not figure (only in the sense that situations can ‘frame’ decisions). And he refers to folk psychology, which is also a reference to the model of Belief and Desire, not to the model of Situational Logic. Apparently he sees no difference between both approaches.

This makes it difficult to explain why these variants are called by different names and why the adherents of both models are involved in quite different discourses. The debate about expected utility theory, discussions about the violations of the axioms of rational choice, has completely passed by the adherents of the model of Situational Logic. Conversely, the discussions about the contradiction between Popper (n), the falsificationist, and Popper (s), the ‘situational scientist’, or about the correct interpretation of the Rationality Principle, has completely bypassed the theorists who embrace the Belief-Desire model. The mutual negation, or even mutual

discusses rational choice theory in his study about economic science (Hausman, 1992). Books about rational choice from neighboring disciplines rarely refer to the model of situational logic (see for example: Elster in his study about rationality (Elster, 1979), the political scientists Green and Shapiro (1994) or the sociologists Coleman and Fararo (1992)). The only two exceptions I know of is Langlois, who in his studies about institutional economic theory explicitly refers to the model of situational logic (see Langlois, 1986; Langlois and Scontos, 1993) and a symposium about Popper published in the Philosophy of the Social Sciences, vol. 28, 1998 organized by the Research Unit for Socioeconomics at the Austrian Academy of Sciences.
ignorance, would be much more comprehensible when these models appear to be completely different. And I think that there are many indications to think that these models are different. Of course, one could argue that Popper's model of situational logic is merely an articulation of the interaction between the agent's beliefs and his desires that produces a primary reason. But I think it is more interesting to explore the possibility that these models are different.

The model of Belief and Desire is grounded in folk psychology, whereas the model of Situational Logic is presented as an anti-psychological theory. In the model of Belief and Desire much attention is focused on decision processes, whereas in the model of Situational Logic the decision process is replaced by an optimization problem that is defined entirely in terms of situational constraints (given the agent's goals). In the behaviorist model of situational logic utility functions are merely mathematical representations of what we expect purposeful agents to do. The utility functions are taken for granted and, therefore, do not contribute a great deal to the explanation of what agents do. A change in conduct will be explained by a change in the constraints.

Also the mystery of the mutual negation would disappear when it could be shown that these models are different and separate explanations of intentional human action, and this is the task that I will undertake in this chapter. I will take the distinction between an ‘internalist’ and an ‘externalist’ explanation of human action (a distinction based on an article by Satz and Ferejohn in 1994) as my point of departure. They argue that, in many social scientific explanations, we are not interested in explaining a particular agent's behavior but rather, in general, the regularities that govern the behavior of all agents. In such cases, it is not the agents' psychologies that explain their behavior, but the environmental constraints they (collectively) face. In the theory of situational analysis, an action is fully determined by the situational constraints. Each agent placed in the same circumstances would make the same choice. Situational constraints facing a multitude of agents
could explain the behavioural regularities among agents. Although Satz and Ferejohn overstate the difference, their distinction can be usefully applied to compare the model of belief-desire with the model of situational logic.

I begin this chapter with a description of the internalist-externalist distinction. Thereafter, I will present an outline of the model of Belief and Desire (MBD). Since I have not discussed this model in the previous chapter, I will also pay attention to some of the criticism of this approach. I will then continue with discussing the model of Situational Logic (MSL), and compare both approaches to find out whether the internalist-externalist distinction is confirmed.

2. Internalist and externalist explanations of human action

Satz and Ferejohn define rational choice theory "(..) as a psychological theory wedded to a reductionist programme in the social sciences, (...)" (Satz and Ferejohn, 1994, 71) Rational choice theory is seen as describing what is actually going on inside us when we reason. From this perspective, mental entities (preferences and expectations) are considered as related to choice, in the sense that they are reasons for an agent who is considering his options. However, when we are not interested in explaining a particular agent’s behavior but in general regularities, then we have no reason to analyse individual mental states but should look instead, according this view, to the environmental constraints they (collectively) face. This is the externalist interpretation.

Satz and Ferejohn believe that rational choice explanations are most plausible in settings in which individual action is severely constrained, and thus where the theory gets its explanatory power from situational conditions and not from individual psychology. In the absence of such strong environmental constraints, rational choice theory is a weak theory with limited predictive power. "We fully realize the irony of our contention: the theory of rational choice is most powerful in contexts where choice is limited.” (Ib.,72). Despite their trust in environmental constraints explaining
actions, they reject a view in which agents are seen as automatons: human agents must be motivated to act. Thus, they reject radical anti-psychologism. They admit that, for certain kinds of questions, an internalist perspective is crucial, for instance for questions about the normative purposes of rational choice theory, or about individual behavior. But many social-science questions cannot be answered at the level of individual psychology. These questions concern the relative stability of certain patterns of behavior. In these cases, behavioral patterns or aggregations of patterns can be explained or predicted in terms of observable parameters. In such explanations individuals can be replaced without changing the causal structure in which actions are embedded. Structural conditions (such as competitive markets, or electoral procedures) constrain and narrow the number of psychological possibilities. Satz and Ferejohn believe that there are analogies to natural selection, and that much of rational choice theory operates in the context of powerful mechanisms. This is not meant to dismiss internalism. Whether individual or structural accounts of social phenomena are appropriate depend, or so they believe, on the purpose of the explanation. For some purposes, the appropriate focus is on individual agency and choice. For many social-science questions, however, the appropriate focus is on how social structures and features of the agent’s environment exert constraints on action.

This internalist-externalist distinction has raised an objection by Hausman (1995b) who argues that all rational choice explanations are psychological explanations. He admits that, in some circumstances, the actions of agents will be the same despite a wide range of different beliefs and preferences. The facts about their beliefs and preferences seem to be trivial, but this does not make them irrelevant. Hausman presents the

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27 Rule-led behavior, which would also explain behavioral regularities, is explained by external institutional constraints
example of a fire that breaks out in a hotel and as a consequence the guests flee. The fire explains why they flee. The reference to preferences and beliefs is scarcely worth making. But the correctness of the explanation of why they fled depends on their truth. If the guests had not noticed the fire or the fire alarm or would not have cared if they had, then the fire does not explain their flight. Hausman wants to hold to the mental state, which is aroused by a number of beliefs and preferences, as part of the explanation of the agent’s action, even when this mental state is, as in this case, no more than an activating or driving force. Most rational choice theorists would agree with him. I guess that even Satz and Ferejohn would find it hard to disagree with such a description of the role of psychological factors in even an externalist’ explanation of intentional actions.

Therefore, I propose to regard theories or hypotheses in which the role of belief-preference couples is restricted to that of an activating stimulus as externalist theories. Theories about intentional actions I regard as internalist theories. I will now proceed with the internalist approach to rational choice.

3. Rational choice explanations and folk psychology

Much of the methodological distinctiveness of rational choice theory stems from the fact that a theory of rationality and intentionality lies at its theoretical core. An intention to act requires both a belief and a desire or pro-attitude. An intention to act requires two transformations of the belief-desire (or expectations-preference) couple. The first is obvious. The belief and desire must be brought together. This transformation is what is usually thought of as ‘practical reasoning’, reasoning from an end to the adequacy of the means. But this is not enough. We do not perform every action that we believe would promote some good or satisfy some obligation. The second state is that we assess the consequences of an action and commit ourselves; i.e., that we fulfil a primary reason.
It is true that someone who has a desire that he believes he can realise in a certain way will have a tendency to act in that way. But most such tendencies (or dispositions) are not realised. Much of the explanatory force of reason-explanation comes from the fact that they specify which pair, from among the vast numbers of beliefs-desire pairs that were suited to cause the action, actually did cause it. What we need, in order to show how particular desires and beliefs work together to explain actions, is some general theory about desires, beliefs and actions. Davidson has tried to formulate such a general theory.

In his seminal article “Actions, Reasons, and Causes”, Davidson defended the view that rationalisations are species of causal explanations (or at least compatible with them) against different kinds of objections. "Whenever someone does something for a reason, (...) he can be characterised as (a) having some sort of a pro-attitude towards actions of a certain kind, and (b) believing that his action is of that kind". (Davidson, 1980, 3/4) A primary reason is a pair of mental states: a belief state and a pro-attitude. A pro-attitude is a term, introduced by Davidson, to be used for the various sorts of mental states that can combine with certain beliefs to constitute reasons for acting. In order to understand how a reason of any kind rationalises an action, it is necessary and sufficient that we see how to construct a primary reason. What makes a primary reason a reason for an action is a logical relationship, expressed by a practical syllogism between the propositional contents of the belief and the pro-attitude constitutive of the primary reason. (see LePore and McLaughlin, 1985, 7)

Thus, the reason for which I act

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28 Pro-attitudes include desires, wants, urges, prompts, and a great variety of moral views, esthetic principles, economic prejudices, social conventions, and public and private goals and values insofar as these can be interpreted as attitudes of an agent directed towards actions of a certain kind (LePore and McLaughlin, 1985).

29 Davidson defines a primary reason as follows: “R is a primary reason why an agent performs the action A under description d only if R consists of a pro-attitude of the agent toward actions with a certain
provides me with premises from which I could have reasoned to a conclusion that corresponds to my action. The primary reason for an action is its cause. Therefore, a rationalisation is a kind of causal explanation.  

There have been various lines of attack against the claim that a primary reason for an action is its cause. It has been said that a cause must be logically distinct from the alleged effect, and that a reason for an action is not logically distinct from the action. Since a reason makes an action intelligible by redescribing it, we do have not two events but only one under different descriptions. Causal relations, however, demand distinct events. But Davidson rejects this argument. When somebody flips the switch, then this action is further describable as having been caused by a desire to turn on the light. To describe an event in terms of its cause is not to confuse the event with its cause, nor does explanation by redescription exclude causal explanation. A familiar criticism, one that also is used by Rosenberg (1988), is that ordinary causal statements imply law-like generalisations. Davidson replies that the idea that no causal explanation is given unless a law has been produced is based on a misunderstanding of the kind of explanations that rationalisations produce. But this is the kind of answer that fuels the intuition that an intentional explanation is quite different from a causal explanation, as it is usually understood.

Hodgson (2001) distinguishes three aspects of the dispute. He notices that it is a fundamental empiricist principle that the relation between the antecedent and the consequent of a law-like generalisation cannot take the form of a logically necessary connection, but must be a contingent one. The

It is questionable whether the phrase "causal explanation" is appropriate in this context. Anyway, a rationalization is not a law-like generalization. It is an attempt to explain why the agent undertook the action. Thus, a rationalization of an action is a kind of Verstehen.
second point is that causal explanations by-pass any recourse to intentional phenomena like reasoning, deliberating and choosing, whereas rational explanations are based on the deliberative, cognitive capacities of agents. Causalism leaves the matter of the agent’s conscious control of his intentional actions in relation to an objective entirely out of the picture. (Hodgson, 2001, 120; see also Wilson, 1985) The ultimate source of this disregard is the specific failure to capture the very special idea that intentional action is continuously and consciously directed toward a desired or valued end. Related to this point of criticism is the next and – in the view of Hodgson – also the strongest criticism of the equation of rational and causal explanations, the negligence of the normative aspects of reason-giving explanations. Rational explanations include a justification for the intentionally undertaken action, based on the desires and beliefs that provoke it. Non-purposive, causal explanations do not attempt to furnish justifications. (B. Hodgson, 2001, 21)  

To conclude this dispute I turn to Aristotle’s distinction between ‘efficient’ and ‘final causality’. Efficient causality is similar to the materialist and mechanical causality in the natural sciences. Final causality or ‘sufficient reason’ is teleological in character; it is directed by an intention, purpose or aim. Causal explanations are based on efficient causality, rational explanation on sufficient reason. Causal and rational explanations, therefore, have to be distinguished. To explain an action is to rationalise it. This means that we have to furnish arguments from which can be deduced that this was what someone intended to do. We can refer to some objective, or we could try to explain it by connecting the action with some rule or principle.

A primary reason explains an action only if the contents of the belief and desire entail that there is something desirable about the action, given the description under which the

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31 In the model of Situational Logic the agents goals and beliefs being part of the situation are taken as given. The consequence is that the justification of actions cannot be discussed.
action is being explained. This requires that the observer should try to apprehend what is going on in the agent’s mind, in order be able to find what happens ‘understandable’. This is the method of Verstehen. A common definition is: “Verstehen is the apprehension of [intentional mental] states of others expressed in their terms.”(Bacharach, 1989, 132) A problem with the Weberian method of Verstehen is that we have no means of knowing that the meaning-context that we think is appropriate is at all the same as what the person has in mind. In Schutz’s interpretation, Verstehen holds no reference to either empathy or introspection. “Verstehen is solely the imputation of ‘objective meanings’ (generalised plans and motives) by an observer equipped with an overlapping stock of knowledge and scheme of relevance.”(Prendergast, 1986, 20).

In order to legitimately claim to have understood an action, it is sometimes sufficient to find out whether this behavior is (partly) determined by a certain rule or set of rules; that is, rules that can combine with beliefs and/or desires to form primary reasons for action. Interpreted in this way, there is no principled contrast between Verstehen and discovering the rules that give rise to an action. The aim is not to subsume some human action under a causal law but to discover the rules (or goals or meanings) that guide the action and render it meaningful.33

32 We will see that both notions of ‘Verstehen’ return in the discussion of situational analysis.

33 Some scientists deplore the situation that the sciences are saddled with more than one version of causality. G. M Hodgson proposes a solution that he calls ‘emergentist materialism’, in which consciousness and volition are seen as emergent properties of the material world. This preserves materialist causality but endows it with additional, irreducible, properties at higher ontological levels. Human intentionality is thus an emergentist transformation of materialist causality. In this approach will and consciousness are regarded as emergent properties of the human nervous system. (G. M. Hodgson, 2000)

I very much doubt that this is a solution. It is an illusion to think that there is a one-to-one correspondence between all facets of human behavior and neurophysiological features. And how do we account for the countless
4. The failure of belief-desire explanations

Rosenberg (1994) attacks the belief-desire approach that he conceives as the core of economic science in general. Rosenberg’s foremost concern is the question of whether rational choice theory is a scientific theory, and, if it is not, what it is. Rosenberg argues that economic theory – for which I have substituted rational choice theory – is not and cannot be an empirical science. The core structure of Rosenberg’s argument seems to be:

1: Science is characterised by predictive progress
2: Rational choice theory fails to meet this criterion
3: The reason for this is the dependence of rational choice theory on folk psychology.

These arguments will be discussed in turn. Rosenberg repudiates the alternative view that ‘understanding’ is the goal and criterion of social science. As to his second point, Rosenberg appears to hold a rather thin notion of progress. He does not take into account that rational choice theorists have recognised anomalies and have corrected errors, nor does he refer to the emergence of non-expected utility theory. His third argument is the crux and the most interesting part of Rosenberg’s argument. Rosenberg holds that something like the following oversimplified general statement seems to lie behind our ordinary explanations of human actions:

differences between human beings? Concerning the relation between human action and the neurophysiological system, the best we can say is that actions supervene on them. (see for a similar statement Hands, 2001, 170) Hodgson’s proposal stems from his support of evolutionary economics.

34 I follow Mäki’s account of Rosenberg’s attack on rational choice theory (economics). (See Mäki, 1996.) I have omitted Rosenberg’s fourth point, namely: “Not being an empirical science, economics is a kind of mathematical politics.”

35 Since Rosenberg defends the unity of science, he cannot appreciate economic science or rational choice theory as a distinct social science.
[L] Given any person $x$, if $x$ wants $d$ and $x$ believes that $a$ is a means to attain $d$, under the circumstances, then $x$ does $a$ (c.p.)

Does [L] underwrite our explanations of actions because it describes causal relations – that is, law-like connections – in virtue of which actions are determined by beliefs and desires? Or does [L] underwrite these explanations because it helps us identify the reasons that make a particular action justified, intelligible, or rational to us? Of course, it is possible that [L] does both. There is a longstanding standard for causally explaining an individual event, namely the ‘covering law’ account. The occurrence of the event should be derivable from one or more general laws and a statement of initial conditions. For example:

(1) initial conditions: 1a. desires; 1b. beliefs
(2) law: for any agent $x$, if $x$ wants $Ø$ and $x$ that doing $a$ is the best way for him to secure $Ø$, do $a$
(3) conclusion: $x$ does $a$

How do we get to know the initial conditions? The methods we normally deploy (experimenting, asking and observing) involve inferring from action to desire and belief and put us in a position of circular reasoning. In order to explain action, we need to know desires and beliefs. And in order to explain the desires and beliefs, we need to know the action. Moreover, in order to employ behavior as a guide to beliefs we have to hold the agent’s desires constant, and in order to use behavior as a guide to his desires we have to hold the beliefs constant. Thus, without knowing at least two of the three variables, we cannot know the third. (Rosenberg, 1988, 33/4) 36 We can never measure the initial conditions

36 Mäki argues that this simply is not true. One is, to a certain extent, able to tell what a person wants or believes by knowing her background, or by past experiences, or by knowing the relevant community values, beliefs and conventions (Mäki, 1996, 19). If we are not interested in the beliefs-
independent of \([L]\), which makes \([L]\) unfalsifiable. We cannot
describe actions without committing ourselves to the
existence of desires and beliefs that contain descriptions of
that action. This precludes the existence of contingent
connections between desire, belief and action, for they can
only be described in terms that refer to one another. \([L]\)
defines what it is to be an action, or defines it with respect to
the notions of desire, belief and action.\(^{37}\) Desire, belief and
action are logically connected. This is the logical-connection
argument. In the practical reasoning process, the relationship
between the premises and the conclusion is a logical one, in
the sense that the acceptance of the premises constitutes a
logically sufficient reason for accepting the conclusion. Thus,
rational choice theory is vacuously true.

Rosenberg’s judgement is essentially based on the fact of
predictive failure. He believes that rational choice theory has
not shown systematic progress through time. He attributes
the failure of rational choice theory to a feature that it shares
with most social sciences: the commitment to the intentional
explanatory framework of belief, action and desire. From this
point of view, the intentional vocabulary of belief and desire
does not identify scientifically significant features of the
world. They are no ‘natural kinds’: "sets of items that behave
in the same way, and that share the same manageably small
set of causes and effects, and so [they] cannot be brought
together in causal generalisations". (Rosenberg, 1994, 224).
They embody pre-scientific concepts and should, in his view,
be condemned to the dustbin of history, as goes for folk
physics or folk astronomy.\(^{38}\) The dependence on folk
desires of particular persons but of groups of people, and if we want to
explain regularities of behavior among people, this is a strong argument.

\(^{37}\) In fact, Rosenberg believes that \([L]\) can be identified as a principle of
instrumental rationality. (Rosenberg, 1988, 28) Thus, far from being a
contingent law describing the causes of an action \([L]\) turns out to be a
definition of what it means to be rational.

\(^{38}\) Eliminativists predict that neuroscience will refute folk-psychology in
the same way as Kepler and Copernicus refuted Ptolemy (see D.W.
Hands, 2001 about the ‘naturalistic turn’; see also Jackson and Pettit,
psychology is, according to Rosenberg, the backbone of all rational choice explanations as well as the explanation of many other sciences. Rosenberg contends that there has been no progress in developing genuine laws of individual and social behaviour. This fact suggests to him that such laws are unobtainable. 39

5. ‘Folk psychology’ and unobservables

The doubt that MDB could ever become a scientific theory is not based on the mere fact that it employs concepts derived from folk psychology, but also on the fact that these concepts are unobservable (this applies to both the MBD and the MSL). Unobservables have a dubious epistemological status. In the view of philosophers like Van Fraassen, it is not possible to have evidence for or against claims that refer to unobservable things. So, science cannot aim at the truth concerning any underlying unobservable reality. 40 In some ‘absolute’ sense of observable or perceptible, beliefs and preferences are not observable. On the other hand, they have for thousands of years been a part of a common-sense understanding of the

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39 For those who do not share Rosenberg’s methodological monism, it is enough to know that intentions and beliefs can rationalize an action.

40 Constructive empiricism maintains that the accumulation of scientific knowledge refers only and exclusively to observable phenomena. One does not have to believe in the existence of unobservable entities to construct theories. The aim of science is to construe representations of reality that are empirically adequate.
world. "[C]laims about beliefs and preferences cannot be regarded as observational, but someone who has no quarrel with common-sense reality and then turns to assess economic theories must regard their claims about expectations and preferences as no more problematic than are claims concerning observables". Hausman, 1988, 198) Preference rankings and subjective probabilities are merely formalized variations on familiar notions of desire and belief. And, therefore, “one cannot be an anti-realist about unobservables of economics and a common-sense realist.” (Ib., 198).

The MDB mainly deals with what Mäki has coined ‘commonsensibles’. While desires and beliefs are not observable in a narrow sense, they are commonsensibles since they are part of the ontic furniture of common-sense psychology, which we all employ in our daily lives regardless of our having an academic degree in psychology. "Theorising in economics is largely a matter of isolation and abstraction, idealisation and simplification among commonsensibles, rather than postulating unobservable entities". (Mäki, 2000, 111) Regarding the role of common sense, Mäki formulates three options. "The first is the acceptance of the common-sense view, or folk psychology, as the correct description of the nature of human action and its elements. (...) Few scientists take this option seriously. The second option is the adoption of consistently scientific realist principles all down the line, in that all common-sense descriptions – also those about human action – would be replaced by scientific (e.g., neuro-physiological) re-descriptions. (...) The third option involves the point that, no matter what ultimately intentions, valuations and beliefs are, economic matters are certain kinds of manifestations thereof and this constitutes their essence". (Mäki, 1990a, 340) Mäki prefers the third option. "Economics proceeds by modifying the common-sense picture by excluding, idealising and recombining (and, of course, renaming) familiar elements in the common-sense picture". (Mäki, 2000, 112). There is no ontological departure from the world occupied by commonsensibles in economics.
The disagreements between realists and anti-realists about the question whether claims about unobservables are true or false and whether they can be supported by evidence are of little importance within MDB, because here the unobservables are part and parcel of our everyday understanding of the world. (see also Nelson, 1990)

6. The model of situational analysis

The impact of Popper(n), the falsificationist, on economic science has been much stronger than the impact of Popper(s), the situational analyst, though the MSL did fit the behaviorist' turn in economic science. Popper admitted that economics was the original inspiration for situational analysis. In describing his ideas on situational logic Popper explained that his main point was “to generalize the method of economic theory (marginal utility theory) so as to become applicable to the other theoretical social sciences.” (Hands, 1985, 85)" Still, the paradoxical fact about situational analysis explanations is that they cannot be falsified – and thus Popper(s) conflicts with Popper(n). Nevertheless, the model of situational analysis is useful as a further exploration of rational choice theory.

Popper’s view was that "it is people’s ability to react appropriately to their situation and to respond to criticism that makes them rational and autonomous. It is also what makes their behaviour accessible to scientific inquiry". (Koertge, 1975, 438/9) The fundamental principle of the programme of situational analysis is that we should and must seek explanations of human behaviour in terms of the situation that the actors find themselves in. Action is explained as a rational or logical response to the situational

41 Blaug is rather cynical about this. He claims that it is a fact that Popper knew little about social science and even less about economics. Popper’s statements about situational analysis, moreover, are very sloppy: they seem to be a restatement in loose language of the ‘Verstehen Doctrine.’ (Blaug, 1985)
environment as the agent sees it. Thus, in order to explain an action, we describe the agent’s situation, i.e., his or her goals and beliefs and environmental constraints to determine which action is appropriate in the circumstances, as the agent perceives it, and, with the addition of the rationality principle, deduce what the agent will do.

Koertge has presented the following informal model of the situational analysis (Koertge, 1975, 440):

1. Description of the situation. Agent A was in a situation of type C.
2. Analysis of the situation. In a situation C, the appropriate thing to do is x.
3. Rationality principle. Agents always act appropriately to their situations.
4. Explanandum. Therefore, A did x

The situation that is central in the explanation is not the agent’s objective situation but the situation as he sees it. To explain an action by using the ‘Rationality Principle’ does not imply that the agent’s beliefs are reasonable, nor even that his method of making decisions is a good one. However, in a more elaborate model Koertge adds that the Rationality Principle does "presuppose that the agent appraised her situation in a systematic way, that the result of the appraisal procedure is in principle open to change should the set of available solutions change, and that there is a match between the appraisal and the action. Thus, the Rationality Principle is far from empty, and it’s content can be further increased by building supplementary theories of error, decision-making, etc.

42 In the previous chapter I emphasized that we must assume that an agent acts reasonably, because otherwise there would be no limits to the numerous possible explanations for his action. Originally, Popper had the same opinion. But Koertge writes that Popper changed his views on this matter. In his earlier writings, he limited the scope of the principle to the actions of sane people, but in “The Rationality Principle” he stressed that the principle could also be applied to the actions of a madman. (Koertge, 1975, 441)
and belief formation". (Ib., 446/7) But in this statement she is, in my opinion, confusing the two concepts of rationality that we can find in the MSL: individual rationality and the Rationality Principle.43

The fundamental methodological maxim for this research programme (what Lakatos called the negative heuristic which protects the hard core) might be formulated as follows: “Try to explain all actions and beliefs in terms of situational analysis and the Rationality Principle. If a given action or belief appears to be irrational always blame your model of the agent’s situation, not the Rationality Principle.” (Ib. 457)44

An important question concerns the falsifiability of the Rationality Principle. Popper states frankly that it is not always true. Since it is formulated as a universal law, it is falsified when a single agent violates it. Popper argues that, although such agents do exist (i.e., the principle is false), it is approximately true – that is, most but not all agents obey the principle. His defence of the unfalsifiability of the Rationality Principle is that it is potentially falsifiable (that is, though we could choose to reject it, we simply decide not to). We make a methodological decision that, when faced with a falsifying

43 The second definition conflicts with the preceding one. Both formulate precisely the distinction that Popper makes between a madman and a rational person. Popper makes a strict distinction between rationality as a personal attitude and the Rationality Principle. Rationality as a personal attitude is the attitude of readiness to correct one’s beliefs. The Rationality Principle is rather a minimum methodological postulate to animate a model of a social situation similar to that of Newton’s law in the explanation of motion in the solar system; it is the principle of acting appropriately to the situation as the agents sees it. (Popper, 1967, 365) Koertge is mixing these two notions of rationality.

44 The point is that an agent’s preferences and beliefs are defined as part of the situation. Thus, when we assume that an agent follows his preferences and we take it for granted that the agent acts appropriately to his situation as he or she sees it, we cannot but take the agent’s analysis as the point of departure. We meet here a complex description of the two prerequisites for a rational action: a motivating (or animating) device and instrumental rationality. To make sense of the ‘zero method’ (see note 54), we must assume that the agent’s analysis of the situation (that is, his beliefs of the external constraints) is not infallible.
observation about a particular agent, we cling to the Rationality Principle and revise our hypothesis about his aims and beliefs. The Rationality Principle is simply the ‘hard core’ of the Popperian research programme in the social sciences. (Hands, 1985, 88) The rationality principle states that agents act appropriately to their situation ‘as they see it’. As Popper acknowledges, this is a minimal notion of rationality. It assumes only that the agent has certain beliefs and goals, and that he acts in an attempt to achieve these goals. This type of ‘subjective rationality’ does little more than posit purposeful, goal-directed behaviour. When interpreted in this way, it is not easy to discover the logical status of the Rationality Principle. It has the form of a universal statement, so it is not verifiable. But it also appears to be unfalsifiable, because it is difficult to imagine a basic statement that would falsify it. And because the rationality principle is unfalsifiable, theories employing it must be viewed as metaphysical. Disciplines that employ it would not be considered sciences. Yet, Popper(s), the situational analyst, insists that the universal law of the social sciences, though false, should never be rejected. Instead the theory in which it is used should be adjusted until the agent’s action can be shown to follow from the logic of the situation. “From a falsificationist’s point of view, situational logic employs a false law, then justifies the procedure by elevating an immunizing stratagem to the status of an immutable methodological principle.” (Caldwell, 1991, 20)

There are a number of ways to respond to this dilemma. Blaug prefers a Lakatosian solution, in which the Rationality Principle is part of the hard core of the neo-classical programme. Caldwell, on the other hand, seeks a solution for the conflict between Popper(s) and Popper (n) in Popper’s writings on critical rationalism. Popper acknowledges that the Rationality Principle is false, although it is often

45 This renders explanations *ad hoc*. ‘It will always be possible to reconstruct a situation to yield the observed behavior by invoking changes in unobservable variables like motives or beliefs’. (Caldwell, 1998, 467)
approximately true. But, a major argument in its favour is that it can be criticised. Situational analysis is rational, empirically criticisable, and capable of improvement. Under falsificationism the goal is demarcation, whereas under critical rationalism the goal is to keep the critical process going, 'to build an ecology of critical inquiry', as Caldwell formulated it. (Caldwell, 1991, 25)

The basic idea presented by Popper is that one needs a model and an animating principle to carry out analysis in the social sciences. A model consists of four basic elements: physical objects, social institutions, the aims of the actor and the knowledge that he or she has of the situation.

The method of situational logic or situational analysis is individualistic but not psychological. 'Psychological experiences are replaced by abstract and situational elements such as 'aims' and 'knowledge'.’ (Popper, 1967, 359) The important thing is not the decision of the individual but the situation that ‘necessitates’ some action rather than others. Popper presented situational analysis as an alternative to ‘psychologism’. To explain social action, we need an understanding of the situation in which social action takes place, not a detailed knowledge of the mental states of individuals. The method consists of constructing a model of the social situation, including the institutional situation in which the agent is acting. Once the theorist has specified the goals of the agent and thus the objective function to be maximised as well as the constraints facing the decision maker, then the implicit claim is that everyone facing those constraints and maximising according to that objective

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46 Notturno advances another argument to retain the principle of rationality despite the fact that it is false. The Rationality Principle is not an empirical principle that each person always acts on adequately in each situation. That hypothesis is clearly false. It is, on the contrary, a methodological principle that places restrictions on what will and what will not count as a rational explanation. (Notturno, 1998)
function will make the same unique choice. There is only one viable solution. The model that enforces a compelling choice is called the single-exit model. (see Latsis, 1972) The limitations inherent in the situation reduce the choice options in such a way that the principle of rationality suffices to ensure a specific (optimal) outcome. It looks as if the strength of the assumption of maximising behaviour, in combination with the assumption of perfect competition, assigns a unique outcome as rational. However, in the context of the situation, the action is in fact a reaction, a ‘mechanical’ action forced upon the agent by (his analysis of) the situation. ‘The method of situational analysis always turns a specific agent into ‘anybody’ who may share the relevant situation, and reduces the agent’s personal aims and knowledge to elements of a typical situational model, capable of explaining in principle a vast class of structurally similar events.’ (Popper, quoted by Bichlbauer, 1998, 423)

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47 The model of situational logic is seen as being capable of establishing an optimum model of human rationality by which we may explain an idealized form of human behavior and deviations from it. Popper suggested the method of constructing a model on the basis of complete rationality (and perhaps complete information) on the part of the individuals concerned, and of estimating the deviation of the actual behavior of people from the model behavior, using the latter as a kind of zero coordinate (the ‘zero method’). In this procedure ‘Verstehen’ is used in both a subjective and an objective way. Once the optimum rationality has been ascertained it operates as a kind of covering law that enables explanation to be put into the hypothetico-deductive form. (Stokes, 1997, 69/70) It is argued that the zero-method enables the situational analyst to generate hypotheses about regularities that can be empirically tested, but I have never seen this done. And it cannot be done, because the method only helps to determine how far the observed behavior deviates from the ideal behavior. The deviation only encourages the scientist to reconsider the goals and knowledge he attributed to the individual.

48 The model of situational logic is recommended when one wants to reconcile a determined outcome with the idea of the free will of the agent. In the model of situational determinism, an agent is free to do what he or she wants to do, but by analyzing the logic of the situation a unique action for a rational agent can be deduced. ‘Free to do’ in this context merely
7. Intentional action and situational logic

I think that is legitimate to draw the conclusion that the MBD and the MSL represent two distinct theoretical frameworks and that the difference coincides with the distinction between an internalist and an externalist explanation of intentional action.

It is notable that the model of Situational Logic does not cite the agent’s preferences and beliefs explicitly. This is due to the peculiar feature of the concept of the situation: in addition to the external environment, the description of the situation also encompasses the preferences and beliefs of the agents. This suggests that the ranking of preferences and the formation of belief have already taken place. The processes of preference and belief formation and the formulation of a primary reason are implicit in the MSL. In Popper’s view the Rationality Principle stands in for the ‘law’ that ‘animates’ the otherwise inert (sic!) collection of situational features. The Rationality Principle as just an animating principle does not accord with the idea that it is criticizable and open to improvement. We avoid this confusion by applying critical rationalism to situational analysis as a whole.

"Consider a theoretical agent in a problem situation that necessitates some overt response. The situational analysis of the agent in question, which consists of aims and information, somehow works out the appropriate option-choice in the circumstances. (...) So, the role of the Rationality Principle is not to ‘tease out’ of the situational analysis an option choice or a practical solution”. Latsis, 1983, 133/4) The Rationality Principle says nothing about the decision process. Rather, its role is to effect a connection, or to bridge a gap, between the decision to do something at t and the actual performance at t+β. The role of the Rationality Principle is in Latsis view a non-empirical bridge-principle that says something about the connection between mental states and behavior. What
animates the actor is a desire to act appropriately or adequately – that is, to act in accordance with the logic of the situation (as she or he sees it). The Rationality Principle as an animating principle is almost empty, because the actor does what is implicit in the situation.50

There is good reason to believe that there are situations that only require trivial deliberation. Once a perfect decision-maker with a perfect utility map in a perfect market is given perfect information, the decision is as good as made. The ranking of alternative outcomes is known, and the decision associated with the best outcome is automatically selected.

But in situations in which the decision-option does not fall out of the situational analysis, the model of a decision-maker without a decision process becomes implausible. Under imperfect knowledge (risk, uncertainty, ignorance) there is an important gap between motivation, preference, situational assumptions and reaching a decision. In multiple-exit situations, the agent’s internal structure, his decision and information gathering rules, his psychological and social-psychological characteristics become central components of the explanation. Thus, decision rules, rules for information gathering and learning procedures, etc. become important. The Rationality Principle is adequate in single exit situations, but it is inappropriate in situations where choice or behaviour depends on the process by which it is reached. (Latsis, 1976; 1983)

On the basis of the comparison of Koertge’s summary of the explanatory framework of situational analysis with Rosenberg’s summary of the belief-desire model (‘If an agent

50 Hands has argued that the rationality principle is “simply a generalized version of the “rationality postulate” or “maximization hypothesis (..)”’. Hands, 1985, 89) This claim is wrong. The rationality principle says no more than that an agent acts appropriately to the situation as he or she sees it. Even a mad man can, under this condition, act appropriately (though it might be difficult to understand it). To get a determinate model, however, one needs to tighten the constraints in such a way that there is only one feasible action.
desires goal d and believes that action a is the best way of attaining d, then, ceteris paribus, the agent will do a’) Hands sees both models as essentially identical: “In both frameworks there is an appropriate action given the desires and beliefs about how to satisfy those desires, and explanation relies on the “covering law” that all agents act appropriately; that x does what is a (or perhaps, the best) “means to attain d under the circumstances”.”(Hands, 2001, 336)

But there is a contrast between the MDB and the MSL. In both models the task is to make the actions of agents intelligible. In the MBD the task is to construct a primary reason, a combination of a belief state and a pro-attitude. An agent performs action A under description d only if the primary reason consists of a pro-attitude of the agent toward actions with a certain property and a belief of the agent that A, under description d, has that property. And whether or not the primary reason can be detected, the action has to be explained by referring to the agent's goals. The prescription in the MSL, on the other hand, is to reconstruct the situation a typical agent is facing in such a manner that a single action can be indicated as the appropriate or reasonable response to that situation. In the process of this reconstruction it is legitimate to revise one's hypothesis about the agent's aims and beliefs, and to be primarily focused on the beliefs concerning the characteristics of the situation. The MSL doesn't say anything about a relation between properties of the action and the pro-attitude.

The second contrast is the absence of deliberation and other mental processes in the MSL. Koertge has tried to broaden the scope of the Rationality Principle in an elaborate model in such a way that it potentially includes processes of belief formation. She has introduced the Rational Appraisal Principle that says that agents appraise their situation in a rational manner. The Rationality Principle says that people always act on the outcome of a rational appraisal of the situation. But in this way she has in fact only eliminated Popper’s ‘madman’, and ensured that the number of possible
actions is limited. Of course, one could argue that since the goals and aims of the agents are included in the definition of the situation the deliberation also concerns the agent’s preferences, but the rational appraisal is primarily focused on the belief formation. To explain social action, we need an understanding of the situation in which social action takes place, not a detailed knowledge of the mental states of individuals. The focus is on the social situation, including the institutional embeddedness of the agent.

Langlois and Scontos also have tried to introduce deliberation processes into their version of Situational Logic. They are simply applying the so-called zero-method in order to rationalize the action. The deliberation is not done by the agent but by researchers (or the impartial outsider), who try to answer the question: why did a perfectly rational agent choose y' instead of (the ideal) y**? (Langlois and Scontos, 1993) This proves once more that a situational analysis can do no more than defining the set of feasible alternatives.

8. Conclusion

Let us, in this conclusion, recapitulate the relationship between both models. We can think of some scenarios concerning the relation between the MBD and the MSL. We can either assume that both models are, in fact, the same, or we believe that they represent two distinct approaches. When you think that they are the same, then you still have to decide whether the MSL is absorbed by the MBD or the latter absorbs the MSL. When you believe that the models are different, then you can think either that they supplement each other or that the two function next to each other. Thus we have in fact four scenarios. In the first scenario it is possible to assume that rational choice theory is in fact the model of Situational Logic, the MBD is absorbed by the MSL. The reasoning could be the following: in the MBD actions are rationalized by the primary reason that motivated the agent to perform it. But the primary reason is, under the behaviorist rule, in fact deduced from the action; this is the approach of
the revealed preference. In the approach of situational logic the action is rationalized by the situational constraints that gave rise to the action. The constrained are deduced from the action; we could speak of the approach of revealed constraints. Compared to the approach of the MSL the approach of the MBD is weak: it refers to unobservables and several motives could probably explain the action. Moreover, we don't really have to know much about the preferences of the agent; to explain an action it suffices that we may assume that he or she is a maximizer. Thus, when we take the preference ordering as given, assume that the agent is rational and has all the information he needs, then we can rationalize the action in terms of the situational constraints. This scenario confirms the conclusion formulated earlier that in the MSL the constraints on the action determine which action is chosen from the feasible set. Its strength is that it could explain the regularities in the behavior of many agents on the assumption that the situation is alike for most agents. We can accept such an assumption when we agree that the situational constraints are market structures. The second scenario is the one in which the MBD absorbs the MSL. But this amounts to nothing more than the usual model of belief and desire with an explicit focus on situational constraints. I discuss this scenario, for reasons that will become clear, together with the fourth scenario.

In the third scenario it is assumed that the action is explained in two stages: stage one explains the ordering of preferences and thus explains how a primary reason results in a preference, a disposition to choose Ø; in the second stage the situational constraints are used to explain how the disposition results in a choice respectively in an action. In this scenario the internal and external conditions for the explanation of the action complement each other. This scenario is seldom applied, because usually either the preferences or the constraints are taken for granted, in which case it coincides either with the first scenario or with the traditional MBD approach.
The fourth scenario takes as its point of departure that both models are, indeed, different, but that they can be used next to each other. There is a kind of division of labor between the models. When you want to explain the ordering of preferences you concentrate on the interaction between beliefs desires and explain the primary reason from the resulting preference. When, on the other hand, you want to high-light the situational constraints then you concentrate on the logic of the situation and take the preference formation as given; the formation of a primary reason and the formulation of a preference is a black box. In this case you deduce the choice and the accompanying action from these situational constraints. The regularities of behavior could either be explained by referring to the way preferences are institutionally framed or by referring to identical situational constraints.

The fourth scenario has its advantages, because the model of situational logic can be useful in some circumscribed situations. The MSL is typically useful in situations where there is only one (representative) agent. When we discuss interacting agents, as in game theory (which is an extension of the MBD), we are confronted with situations in which many equilibria are rationalizable. It is difficult if not impossible to allow multiple solutions in the MSL for it would make it indeterminate. If a set of initial conditions can lead to a variety of outcomes, then the initial conditions do not seem to be very relevant. Therefore, it is to be expected that the MSL is only appropriate in theoretical frameworks in which the interactions between agents is of no or minor importance.

Both Caldwell and Hands argue that situational analysis is the method of standard microeconomic theory. (Caldwell, 1998, 466) But I would rather say that situational analysis is applied in new classical theories that combine theories about representative agents in competitive markets with general equilibrium theory. Another theoretical approach that is suited to the MSL is that which Alchian formulated in 1950. In this article, Alchian asserted that firms who are well adapted
to the demands of the environment would be selected by the economic system to survive, while the other firms will disappear. The environment selects the firms that are successful, that is, which make a profit. Alchian extended the model of natural selection to adaptive behavior (especially, imitation). In this model imitation, innovation and positive profits are the economic counterparts of genetic inheritance, mutation and natural selection in the biological model. We have, thus, two approaches that are quite compatible with the MSL; the one is a model of perfect competition, the other is an evolutionary approach. The first is applied in new classical models, but is of scant relevance in the new institutional theories. The evolutionary model has a broader application, but modern evolutionary theory differs from the approach that Alchian presented. 51 Strict evolutionary theories are most useful in theories about spontaneous orders.

I think that the fourth scenario is the correct one. The alternative to the MSL would be the variant in which the MBD "absorbs the MSL", i.e., in which there is an explicit attention to situational constraints. 52 The MBD tolerates the existence of a plurality of reasons for actions in terms of belief-desire combinations that are potential primary reasons. Competing motives and/or different readings of the situation give rise to different potential actions. The solution is to tighten the constraints, but this can be done in a variety of ways. An economic, political or moral reading of the situation

51 In Alchian’s view the fate of firms or industries is completely determined by situational factors. In the example that he presents of gasoline stations, the station that survives is not the station that is most adapted to the environment, but the station that is situated in the most favorable environment. A similar view (though not focused on firms but on human development) can be found in Jared Diamond’s “Guns, Germs and Steel” (London: Vintage, Random House, 1998). This book differs in an important respect from economic-evolutionary approaches for it is a book about long-term development rather than evolution and equilibrium. Moreover, it can be read as an anti-racist manifesto, because it shows how geography and biogeography, not race, mold the contrasting fates of the people in the different continents.

52 See also note 188 in chapter X, section 7.
would lead to different outcomes. There is more than one potential ordering of preferences for agents can frame decisions. Though the goals or aims of the agent are usually given in the MBD, it is not impossible to question these goals and aims, as is done by many philosophers who distinguish motivating and justifying reasons and are questioning the connection between the two. There is literature about first- and second-order preferences, about meta-rankings etc. When we want to take into account higher- and lower-order preferences and the existence of ‘could have been preferences’ and phenomena like regret, we have to introduce additional psychological notions, and this is possible in the MBD. Knowledge is important in both the MBD and the MSL. Knowledge concerns not only ‘knowing-that’ but also ‘knowing-how’ to do something. Knowing-that and knowing-how do not coincide, but they do overlap. In practice, man must prove the truth, i.e., the reality and power of his/her thinking. Knowledge is not divorced from the meanings that people attach to their actions. These meanings can be discovered in the ideas, beliefs, concepts and knowledge held by people in society. The belief-desire model, influenced as it is by ‘folk psychology’, is most in keeping with the idea of rational choice as a form of practical reasoning.  

53 This is also the reason why I do not believe that the model of situational analysis is better suited than the belief-desire model for application to cases in which people are, as it were, trapped in their situation, e.g., poor, unemployed people living in slums, or homeless addicted people.