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# Rational and Entrepreneurial Actions

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## Rational and Entrepreneurial Actions\*

*Kein Regel wollte da passen,  
und war doch kein Fehler drin<sup>1</sup>*

### 1. Introduction

Most inquiries in the social and behavioral sciences explain individual behavior in terms of an agent's beliefs and desires regarding the consequences of her actions. One of the most successful explanatory schemes that builds on this folk-psychological model is the theory of rational action or rational choice.<sup>2</sup> In this theory, coherent beliefs and desires produce actions in a rational fashion, and actions are represented as the outcome of a well-defined and stable *rule*. This rule, an example of which is expected utility maximization, determines the relationship between an agent's actions and her basic attitudes, and offers an understanding of her behavior. While there are various interpretations of this theory, in its most ambitious version it aims to serve as a model for description, explanation and prediction, and thus achieve all that a fully empirical theory can.<sup>3</sup>

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The focus of this essay is on the problem of description i.e., the way the theory translates behavior into actions. I will explain later in this essay what this problem is and why it is significant and will briefly note how it precedes the problem of explanation and prediction. My aim is to point out a particular limitation that the rational model imposes on action descriptions and contrast it with a different model that I call entrepreneurial. To motivate this distinction, I first argue, following Donald Davidson, that in the empirical interpretation of decision theory, the rationality postulates correspond to a particular model of description rather than to a falsifiable premise about how people act. The reason is that the evidence which would be necessary to conclude that through behaving in a particular way someone acted irrationally i.e., not in accordance with a stable rule of action, cannot be logically separated from the way this behavior is described as action. When confronted with data on one's observable behavior, rationality postulates correspond to a process of measurement, which allows the theorist to represent this behavior as action in terms of fully measurable beliefs and desires. The second and more novel point of the paper concerns a distinction between two models of action descriptions: rational and entrepreneurial. In the rational model, actions are described in terms of an agent's beliefs and desires where these desires and beliefs exist in full force prior to acting and the consequences they concern exist independently of the agent's actions. The type of beliefs and desires that enter into rational action

descriptions are located in a stable domain, which admits the same kind of description both before and after a particular action is carried out. Actions do not change the way consequences are viewed and described, and the beliefs and desires revealed by rational actions are themselves defined over the unchanging logical space of consequences hence their possibility is also independent of the agent's behavior. Thus, rationality postulates ultimately involve a commitment to a static model of describing actions.

. In contrast to rational actions, entrepreneurial actions are not best portrayed as events in a space of stable descriptions rather they are actions that create new descriptions of consequences and possibly disrupt old ones. Entrepreneurial actions inhabit a world, which requires different descriptions of the set of possible actions before and after the actions in question are completed. Entrepreneurial actions are carried out by agents who act in a world that is not perfectly transparent to them and in which the description of the relevant consequences changes as people act. In the rational model beliefs and desires are defined over consequences that are fully communicable and in principal measurable independent of the actions that take place. In the entrepreneurial model, there are attitudes that are not measurable ex-ante because they do not exhibit a fully discursive form prior to acting in the world. A successful entrepreneurial action, however, can create new descriptions of consequences, and novel beliefs and desires over these consequences. Thus, given such dynamic

characterization of beliefs and desires, the entrepreneurial model can also be understood as a neo-Kantian or constitutivist approach towards agency.

The introduction of the entrepreneurial model is motivated by the limitation that rationality imposes on our understanding of action descriptions in that it forces us to portray actions in a stable domain. This observation is distinct from the arguments that concern the limitations of rational self-interest as the motivational basis of humans, as in Sen (1977) or the limitation of probabilistic sophistication of human reasoning, as in many studies on the psychology of decision-making e.g. Tversky and Kahneman (1974).<sup>4</sup> It focuses on the constraints that an empirical notion of rationality imposes on the *description* of actions and offers an alternative model where the creation of action descriptions is linked to acting itself.

Although any solution to the problem of description has implications for problems of explanation and prediction and for the question whether it is possible to draw a meaningful distinction between a normative and a descriptive interpretation of the theory I do not consider these problems here. Also, I do not explicitly discuss the concepts I use in this essay, in the context of the vast literature on the philosophy of action which discusses related problems. My aim is only to discuss rationality in terms of the model of description it imposes on behavior and contrast it with a different model. Some of the implications of drawing a difference between rational and entrepreneurial actions for our understanding of political and

economic agency, however, are discussed in my companion essay.<sup>5</sup>  
'Author' (2005).

The rest of the paper is organized as follows. In Sections 2 and 3, I present the problem of rational action descriptions via Ramsey's procedure of inferring beliefs and desires from choices, and argue that rationality postulates are best understood as conditions for measurement. In Section 4, I argue that this measurement requires a stability condition which guarantees that the consequences of an action are described in the same way both before and after an execution of an action. In Section 5, I present the model of entrepreneurial action and illustrate it with Kant's theory of the Genius. In Section 6, I compare rational and entrepreneurial actions, and argue that the rational model allows for a realist interpretation of agency, while the entrepreneurial model can be understood as a neo-Kantian approach where the existence and the measurement of beliefs and desires are not logically independent. In Section 7, I further illustrate the difference between the models by considering the problem of failure in action. Finally, in Section 8 I conclude the paper.

## **2. Actions and Descriptions**

The observation of someone's external behavior does not entail the observation of her actions. By observing an agent's behavior we do not automatically gain access to what the agent *does* when she behaves in the

particular fashion she does. To see this imagine that you walk out the door and in so doing you step on my foot. Based on this observation alone, I cannot tell whether your action is better described as a case in which you wanted to walk out the door or a case in which you wanted to step on my foot. Understanding actions as events under descriptions, along the lines suggested by Anscombe (1979), one can argue that observing a behavioral event is logically distinct from specifying a description of this event under which it is an action. It follows that if we are interested in the description of the agent's behavior under which it is an action, by which I mean a description in terms of this agent's desires and beliefs, we need to identify things other than just her behavior.<sup>6</sup> We have to describe the events corresponding to this behavior in terms of the agent's beliefs and desires concerning the consequences of her actions. Thus, we need to specify the beliefs and desires relative to which a particular piece of behavior is an action. In other words we face the problem of translation because as we transform our observation of behavior into evidence on actions.

This translation is driven by a definition of actions whereby an agent performs action  $\alpha$ , if she holds it to be desirable to perform  $\alpha$  in light of what she believes is and will be the case. Here, 'desirable' refers not to a particular characteristic of an action, but also to all of its expected consequences.<sup>7</sup> Acting corresponds to a general judgment, which takes account of all expected consequences of the action. To model actions in this way, we adopt a decision theoretical setup that contains the

description of the relevant totality of the consequences which the agent envisages and cares about. In such a decision theoretical situation, an action -- such as the edition of the Ems dispatch by Bismarck -- is described and explained with reference not to a single desire-belief pair but to the relevant totality of the agent's desires and beliefs.<sup>8</sup>

Decision theory introduces two theoretical constructs defined over the description of the relevant totality of consequences: desires and beliefs. Its important to note that these theoretical constructs are the unobservables of the theory. The experimenter does not have direct access to them, he can only infer them from behavior described as action. For these attitudes to be measurable in the first place, they have to satisfy precise definitions. In the decision theoretical model, desires are understood as intensities or utilities assigned to the different consequences and beliefs are understood as assessments of the likelihood of the various consequences.<sup>9</sup> The relation between actions, consequences, and desires and the beliefs is summarized in the assumption of *rationality*, which combines two related, yet different ideas:

(1) the coherence property of desires and beliefs (e.g. the transitivity of intensities of desires and the probabilistic nature of beliefs)

(2) a behavioral premise or a higher-order disposition, which guarantees that someone acts in accordance with her best reasons.

The coherence property specifies the shape of beliefs and desires i.e. it defines what count as beliefs and desires in a decision theoretical sense. It



claims that beliefs and desires satisfy certain properties such that a rule of action can be defined over these attitudes. These coherence properties are often referred as the rationality properties of an agent's attitudes. The particular form of these rationality properties does not necessarily matter (preferences could be lexicographic, ambiguous etc.) the important part is that one can define a rule over these well-shaped attitudes. Such a rule, like expected utility maximization, specifies the way well-shaped attitudes are 'summed up' and determines the best action for the agent based on her rational attitudes.

The second idea relates to the fact that the agent acts upon this rational rule, i.e., that her actions do in fact conform to this rule. In the positivist view implicitly assumed in economics this second notion of rationality refers to a higher-order disposition, which provides a link between what is best and what one does.<sup>10</sup> Such a higher-order disposition is a distinct premise of the explanatory scheme, one that can be empirically false independently of the other premises. In other words, the second idea refers to a behavioral premise which might be false for a particular person in a particular instance; it is possible to point to actual instances where an agent is irrational and she is choosing an action different from the one which follows from her desires and beliefs. In these instances, rational action explanation is not valid because one of its indispensable premises, the agent's rationality, is false, and the agent is irrational not because she

holds false beliefs or has crazy desires but because she fails to act rationally on whatever desires and beliefs she has.

A problem with this second notion of rationality as a behavioral premise is that, although it is presented as an empirical claim, it is not clear what evidence could prove this premise to be false. Clearly, some information on what the agent believes and desires is necessary to arrive at such a conclusion. If we want to proceed in any serious empirical sense, though, we need to have a valid procedure for *inferring/measuring* beliefs and desires.<sup>11</sup> Without such a procedure there is no way we can be confident that someone did something else than what she should have done rationally. Furthermore, if we want to use this evidence to point to an incongruence between someone's action and what rationally followed from her desires and beliefs, we need this evidence to be logically distinct from the description of the irrational action. There are strong reasons which suggest though that such a test might never be possible because there is no way to separate the description of actions from our evidence about an agent's attitudes.<sup>12</sup> Before stating this argument, however, let me turn to the measurement procedure which assigns empirical meaning to beliefs and desires, and corresponds to the model of rational action description.

### **3. Rationality as Measurement**

The measurement procedure which assigns numerical values to beliefs and desires based on the systematic observation of an agent's behavior was invented by Frank Ramsey in his essay 'Truth and Probability'.<sup>13</sup> Ramsey showed how utility maximization can be turned from an ethical doctrine, based on certain hedonistic principles, to a serious theory of action where the explanatory variables have clear empirical content. He interpreted beliefs as subjective probabilities and desires as utilities and specified a rule, which prescribed how the conjunction of these two were to produce actions in a coherent fashion. Ramsey's idea was to come up with a procedure that allows us to recover these unobservable attitudes by inverting the rule producing the actions in question. His solution was to construct a sequence of binary choices that offered different prizes under different unrealized contingencies. In this procedure a single action, i.e., a choice between two competing options, does not give sufficient evidence about the agent's attitudes but observing more and more such choices allows us to improve our estimates about the agent's reasons for action. Importantly, evidence is accumulated not by adding up the bits we might learn from different, individual binary choices alone, but rather by looking at the pattern these choices exhibit.

As an example, consider three subsequent binary choice situations illustrated in the following table.

	Rains	Does not Rain	Choice
Lottery 1	A	B	Preferred
Lottery 2	B	A	Lottery 1
Lottery 3	A	C,	Preferred
Lottery 4	B	C	Lottery 3
Lottery 5	D	A	Preferred
Lottery 6	D	B	Lottery 5

In the first one, someone chooses a lottery, which offers prize A, if it rains, and prize B, if it does not, over another lottery, which offers prize B, if it does rain, and prize A, if it did not. In the second one, the same person chooses a lottery which offers prize A, if it rains and C otherwise over a lottery, which offers prize B, if it rains and C otherwise. Finally, in the third situation, the same person prefers an option, which differs from the other one only in that it offers prize A rather than prize B when it does not rain. Looking at these three choices separately, we could not say much about what this person believed about the likelihood of rain. Putting together these choices, however, given some assumption about the agent's rule of action we might be able to conclude that she believed that it was more likely to rain than not.

To achieve the measurement of actions, Ramsey did not impose any prior restrictions on the degree of confidence an agent should have in a particular proposition – the probability of rain -- or the intensity of desire an agent should feel towards a possible consequence of her action. He did, however, require the attitudes to be coherent and produce actions according to a particular well-defined rule following from these attitudes. Given these assumptions, his procedure allowed for a gradual measurement of beliefs and desires by viewing a sequence of choices as the expression of the agent's attitude. This gradual procedure is like fitting together more and more pieces of a jigsaw-puzzle so that our view of what we see is formed by viewing an increasing number of pieces as a whole.

It might seem then that Ramsey's theory of rational action starts from scratch without any constraints on what one might believe or desire, and hence offers a valid procedure for inferring what these attitudes are. The behavioral premise of rationality can then be put to a test by looking at a sequence of choices and checking whether it violates certain patterns that a sequence of rational choices should satisfy. For example, if we observe that someone prefers option A to option B both when it rains and when it does not, but also chooses option B over A when it rains with probability  $\frac{1}{2}$  and it does not with probability  $\frac{1}{2}$ , then we might conclude that she violates *certain* principles of rationality. More generally, we might find patterns in action that the choice rule cannot rationalize. In other words,

given all pieces of the puzzle we might find choices, which do not fit no matter how we combine them with others.

There is one important sense, however, in which Ramsey's theory imposes constraints on what one might or might not desire and believe. These constraints concern the description of the consequences of the very options between which one is asked to choose. In the above example, we described the agent's actions as choices between option A and option B. Given that we observe behavior rather than intentional action per se, there is no guarantee that these are the descriptions under which the agent's behavior can be viewed as intentional action. If we accept the claim that actions are events under descriptions and that the same event might admit different descriptions, then finding the descriptions under which the choice between option A and option B is an action has to be part of the measurement as well.

Ramsey's procedure measures beliefs and desires only contingent on some descriptions of these options, but there is no reason to suggest that these descriptions correspond to the ones under which the agent's behavior can be seen as intentional that is, as proper action. If what we measure are beliefs and desires based on the intentional descriptions of actions, then we have to be able to say something about which description is the right one i.e., what the consequences are over which the agent's desires and beliefs are defined. Starting from scratch implies that the only evidence we have for an agent's desires and beliefs are her actions. There

is no external standard that would tell us a priori the set of things an agent might or might not want, and hence this procedure cannot serve as a test of rationality as a premise of behavior.

Davidson argues for a generalization of Ramsey's procedure where the measurement of actions concerns not only the desires and beliefs of the agent contingent on some pre-specified set of consequences, but rather a measurement of these consequences as well.<sup>14</sup> In this interpretation, decision theory is not a testable theory; rather as measurement in physics, it is a basic model to organize our data on behavior. It is a tool for representation that allows us to view a sequence of choices as a set of actions produced by a rule such as expected utility maximization. Variability of descriptions plays a crucial role in this interpretation. Whenever we see something that appears to be a violation of rationality we do not conclude that decision theory is false. Rather we use this seemingly negative result to come up with a re-description of the consequences which allows us to view the sequence of actions in question as a coherent whole.

To return to the jigsaw metaphor, choices are pieces of a puzzle and to solve this puzzle we need to put these pieces together. Human action, however is not like the usual puzzle where all the pieces have well-defined shapes (descriptions) independent of the presence of other pieces; in the measurement of actions the shape of each piece is a function of the shape of every other piece. The shape of a piece (the description of actions) does

not exist independent of the shape of the other pieces; rather it is determined only once the condition that all the pieces should hold together and form a clear picture is satisfied.

This generalized method of measurement can potentially achieve a perfect fit between human behavior and decision theory. Such a fit is achieved simply by describing behavior as rational action in decision theoretical terms. Without imposing any restrictions on the relevant consequences i.e., on the consequences over which beliefs and desires are defined, the rational rule producing actions can be seen as a measurement tool that allows us to view the actions of an agent as a whole. This means that testing this rule or equivalently its rationality is not possible.<sup>15</sup> In this account, decision theory is a representational tool that accords with our basic intuitions of rational action. This representational tool organizes our data on human behavior whereby rationality constraints correspond to a model of descriptions and a form of interpretation.

Given *additional* assumptions on what an agent cares about or the set of propositions over which her beliefs are defined, we might be able to test some parts of the agent's rule of action. In many contexts such assumptions are clearly plausible while in others, even if they are less plausible, they are necessary. For example, if we want decision theory to perform the task of prediction, then depending on how we set up the problem, we have to impose additional restrictions on the theory. These restrictions commit us to certain descriptions of the predicted phenomenon



before it actually occurs. Given these additional restrictions we might observe inconsistencies, but they crucially depend on an ex-ante model of description i.e. where there is nothing that would guarantee that this description was right.

#### **4. Stability of descriptions**

Even if we start from scratch, however, a *stable set of descriptions* is required not only to make sense of explanation, but even to *describe* behavior as rational action. Rational beliefs and rational desires that measure actions inhabit a space of stable consequences. The coherence property of *rational* beliefs and desires can be understood only relative to such a logical space. When beliefs and desires in the form of reasons describe and explain actions, they do so in terms of the consequences of these actions. An important feature of the theory of rational action is that the elements of this space, i.e., the event descriptions over which beliefs and desires are defined, do not change during the course of the investigation. Beliefs and desires might change over time, but the description of the basic consequences over which desires and beliefs are defined has to remain the same throughout the sequence of the agent's actions. It would make little sense to talk, for instance, about the transitivity of desires or the probabilistic nature of beliefs without

postulating a well-defined *set* of consequences that carry different intensities of desires and beliefs.

To see this, consider again the abstract procedure through which the theory supplies a description of one's actions while measuring her beliefs and desires. When the experimenter observes a sequence of choices, he describes this sequence as if it resulted from a rule such as expected utility maximization, i.e., he views this sequence as the result of the actions of someone who had coherent beliefs and desires over well defined consequences. If new evidence seemingly contradicts this picture, the observer re-describes the previous sequence such that the over-all sequence can be viewed as the result of expected utility maximization.

The flexibility which an observer has in describing consequences is the crucial feature, which explains why the theory can accommodate our data on human behavior. Nevertheless this does not change the fact that measurement is possible only by virtue of the assumption that there exists a stable and closed logical space of consequences that carry rational beliefs and desires, and measurement cannot be conducted in the absence of such an assumption. It is built into the very relation of how the sequence of choices *provides information* about the agent's attitudes that the description of the consequences of these choices is stable and does not change from one choice task to another one.

## **5. Entrepreneurial Action**

Describing behavior as rational corresponds, in the models I have been investigating up to now, to viewing it as ex-ante fully describable in terms of its consequences. I would now like to introduce a different type of action, one that does not allow a full ex-ante representation, but which creates new descriptions of itself once completed. I call such an action entrepreneurial, if it admits a description in terms of its consequences that is available only ex-post, once the action is successfully completed. This novel description created by an entrepreneurial action cannot enter any fully discursive ex-ante plan, because it becomes available only after the action has already been carried out. Contrary to the rational model of action, the description created by an entrepreneurial action is by definition new, and hence it cannot be portrayed in a logical space in which consequences are fully describable ex-ante. Neither can it be something on which desires and beliefs are defined in the way we saw in the case of rational action. When, as a result of such an action, new descriptions come into being, the set of relevant consequences changes.

A successful entrepreneurial action creates a new category, and thereby re-defines contingencies and the whole logical space of consequences. It transforms the set of things the agent cares about, and probably also things the agent in question does not care about, although other agents may care about them. These new descriptions account for the

entrepreneurial part of the activity. The fact that actions bring about new descriptions and at the same time *disrupt* a stable accepted view of past actions, is very easily seen in the case of art. The visual techniques in painting such as the use of perspective, allow us to view and describe certain forms of art in novel ways i.e., as lacking perspectives.

The fact that old actions can be seen in a new light as the future unfolds is recognized by several philosophers (e.g. Hegel). For example, Danto has discussed the problem of the indeterminacy of the past and argued that in the case of at least some historical events, there are descriptions that can 'only be known after, and sometimes only long after the event itself has taken place'.<sup>16</sup> In Danto's example, the start of the Thirty Years War can only be described once this war is over. Likewise, asserting that Petrarch opened the Renaissance can only be described once the Renaissance is conceptualized, which happens much later. In short there are descriptions of events that are available only after the occurrence of these events but which nevertheless describe them properly.

In a similar vein, Ian Hacking demonstrates how notions of child abuse, developed in the past couple of decades, radically transformed the way we describe and view past actions, and might account for the fact that child abuse statistics keep growing and growing.<sup>17</sup> In Hacking's view, however, this is not simply a mechanical effect, a matter of sheer classification, which leaves the set of *real* actions performed unchanged. Rather these novel descriptions may well lead to, what he calls, semantic

contagion, i.e., they might give rise to new kinds of intentional actions because they open up new modes of thinking and characterizing what's possible for an agent. People who have never thought, or were previously not aware, of those actions that are newly classified as child abuse, in thinking about child abuse, might be tempted to commit these actions as they start contemplating them as novel possibilities. Hacking emphasizes the fact that new descriptions arise over time and give rise to new intentions and new actions, but he does not link these new descriptions directly to actions themselves. Rather he views them as new models of classification or information creation that might provoke strong reactions on the side of those newly classified, and change actions this way.

In the entrepreneurial model of description the emergence of new descriptions is not only recognized as a logical possibility but it is connected to actions and *acting itself*. An entrepreneurial action creates a new description which then can be applied to novel understandings of both *past and future contingencies*. Unlike the action that plays a role in the rational model, an entrepreneurial action cannot simply be portrayed within a stable domain of consequences because it both disrupts one domain and, if successful, creates a new one. Let me interrupt the characterization of entrepreneurial action, however, and turn briefly to a model of action, which has some similarities to the entrepreneurial one.

## 5. 1 Creating Descriptions and Kant's Theory of the Genius.

In his discussion of the purposiveness of fine art in the Critique of the Power of Judgment, Kant mentions two requirements that fine art must satisfy: it must please and it must provide us with new modes of cognition.<sup>18</sup> If either of these two characteristics is missing, we can only talk of mechanical or agreeable art. Fine art requires originality, the free play of the imagination that is distinct from imitation, while it *improves* our mental powers of social communication.<sup>19</sup> As Kant puts it, *Genius* 'is a talent for producing that for which no determinate rule can be given, not a predisposition of skill that which can be learned in accordance with some rule, consequently that originality must be its primary characteristics'. To this requirement, Kant adds that the work of Genius (i) must be 'exemplary' so as to become for others a 'standard of rule for judging' and (ii) that 'it cannot itself describe or indicate scientifically how it brings its product into being'. In Kant's view, Genius stands in contrast with the talent of a craftsman or a scientist who discovers things by imitating the work of the past, combining and assimilating pre-given formulae or learning from experience.

While a scientist or a craftsman can always give a clear account of how she arrived at the decision to act in *this* way rather than *that*, and why *this* outcome followed from her choice rather than that one, this is not true for the artist.<sup>20</sup> The work of the genius consists of the production of

something to which no determinate rule can be given ex-ante, but which, once it is completed, admits a rule and can be imitated. Such a new rule cannot be planned in advance, as the artist cannot give such a discursive picture prior to finishing her action. The reason for this is that she does not know how and *for what reason* she composed, wrote, or painted a certain piece of art as she did.<sup>21</sup> In this account, the work of the genius is not a rule governed activity, but one that admits of being reduced to rules after completion. Once the work of fine art is finished, it is possible to reduce it to rules. Since these rules are created by the very existence of that piece of art, such a reduction is not possible beforehand. If it were reducible to rules given our understanding of the world before the existence of this piece, then it would be what Kant calls ‘agreeable art’ or ‘mechanical art’ but not fine art.

No matter whether one accepts Kant’s theory as an adequate account of fine art, the work of the genius can be understood as an activity that is not measurable ex-ante, yet which creates a new description once successfully completed. Producing fine art is not a static action that *reveals* the artist’s beliefs and desires, but is rather an activity that *creates* something *about which* one might have beliefs and desires – beliefs and desires that are measurable by Ramsey’s procedure. The action which corresponds to the production of fine art is not an action which corresponds to choosing between risky bets. The beliefs and desires one might have towards the consequences of this action do not exist

*independent* of the action. Rather they are constructed and, in a sense brought into existence as possibilities by the successful completion of this action.

Entrepreneurial action descriptions are not simply unforeseen consequences of otherwise rational actions. In the rational model, one might talk about consequences of an action that were not foreseen by the agent. The rational actor is faced with something that she failed to think about or considered impossible at the time of her choice. These unforeseen consequences occur even though the decision-maker did not consider them possible or simply forgot to think about them. These consequences do not enter into the agent's calculation but they exist in the form we see them, independent of the agent's action. It is possible to say that while the agent failed to foresee this consequence of her action, someone else could have foreseen it and described it appropriately before the agent's action was completed.

## **6. Rational versus Entrepreneurial Action**

As I argued above, actions measurable by Ramsey's procedure, inhabit a space of stable descriptions that does not change during the course of measurement. The set of possible beliefs and desires exists independent of the actual choices of the agent, and thus rational beliefs and desires can be formulated prior to acting. These attitudes can of course change according



to the rational model, but acting does not change what these desires and beliefs concern. Accepting this independence assumption means that one can offer a realist interpretation of the measurement process. We can interpret the measured beliefs and desires that the agent did or could have entertained at the time of her action, and hence measured attitudes also correspond to something that the agent could be held *accountable for*. Also if we knew what the beliefs and desires measurable by Ramsey's procedure were, we could test the agent's rule of action because we could talk about these attitudes independent of what the agent's actions are and what her rule of action is.

In the previous sections, I argued, however, that there is no evidence about the agent's beliefs and desires independent of the description of her actions. The point above also concerns a further issue; even if we knew what the agents beliefs and desires were ex-post, assigning a realist interpretation to them and building a test of the agent's rule of action can only be conceived if we maintain the independence of the description of these attitudes and actions. The beliefs and desires revealed by actions can only be assigned a realist interpretation if these attitudes exist independent of acting in the world. In this case, the rule of one's action can be studied because allowing someone with such attitudes to make choices does not alter the normative coherence of these attitudes.

The realist interpretation of Ramsey's measurement procedure offers a meaningful way of talking about beliefs and desires by assigning empirical

content to them. It does not mean, however, that attitudes which are not fully measurable *ex-ante*, but become measurable *ex-post*, cannot *exist* in any form. There might be various intuitions, hunches and guesses, or even fragments of disordered discursive *beliefs* even though they cannot convincingly be described, and one cannot formulate a plan of action on them *ex-ante*. There might be some incomplete subjective evidence for p, and some other fragments for not p, and also some reasons to believe that neither p nor not p is the right description of the situation. If one allows for such attitudes, then entrepreneurial activity can also be characterized as agency in situations, in which the agent acts in a world that is not completely transparent to her. In these situations, one cannot fully specify how someone's action will bring about certain consequences *ex-ante*. The situation might simply not be one which allows one to attribute to the agent a coherent set of *rational* beliefs and plans. The attitudes that enter into the description of the actions, which the agent undertakes, do not form well-shaped event descriptions *ex-ante*.

In the case of entrepreneurial action, the measurement of beliefs and desires defined over the novel description is not possible *ex-ante*. Only conditional on the success of the action can we try to elicit the agent's beliefs and desires towards the consequences of her action. In other words, a successful entrepreneurial action is *constitutive* of the domain of the relevant consequences and also of the measurement of the agent's attitudes. While in the theory of rational action, beliefs and desires exist

independent of the observation of actions, the theory of entrepreneurial action violates such a realist positions. The reason for this is that certain well-shaped beliefs and desires can only be studied once an action is carried out successfully i.e. the measurability of these attitudes is conditional on the success of the entrepreneurial action. In the entrepreneurial model an action is not only an outcome of but an intervention into what the agent, or people observing the agent's action, might care about. This intervention might change the way past actions are viewed and while in principle it is possible to give empirical content to the agent's belief and desires based on her past actions, such content giving is always conditional on the descriptions created by more recent actions. This means that what a Ramsey-type observer might recover cannot, in the realist sense, be fully described as those beliefs and desires that the agent could or must have entertained at the time when she was acting. In this sense the entrepreneurial model can be understood as a neo-Kantian or constitutivist model of agency.

The above characterization of entrepreneurial action means that we can view these actions as carried out under conditions in which there is lack of full *transparency* i.e. under a form of uncertainty about the consequences that does not allow for a fully discursive and specific characterization.<sup>22</sup> Acting increases the transparency of certain consequences and leads to novel ways of describing the world. This characterization also has links to certain interpretations of Frank Knight's

notion of entrepreneurial activity.<sup>23</sup> In Knight's account, the entrepreneur who acts upon uncertainty rather than upon risk bases her judgment on something that is not given by the normal course of events. Profit as the consequence of a successful activity arises by virtue of the fact that it is not planned or foreseen even in probabilistic terms. As long as we understand the result of this activity as something new and unforeseeable and not merely as unforeseen, entrepreneurial activity which gives rise to *profit* can be characterized as entrepreneurial action.<sup>24</sup> If it were foreseen or foreseeable ex-ante, then rational arbitrage by competitors could bring down this *expected* profit to zero. Competitors could imitate the action giving rise to profit and engage in transactions that would eliminate it. In other words, profit results as an entrepreneurial action changes the transparency of consequences and leads to the realization of *unforeseeable* consequence, and the source of this entrepreneurial profit can only be fully understood once this profit is realized.

The Kantian artist is not interested in profit, only in reflective pleasure that arises from the purposiveness of fine art as it harmonizes with our cognitive interest to see the world in as great a unity as possible. Nevertheless, in so far as his activity is not rule driven and cannot be reduced to rules he is similar to the entrepreneur.

A standard criticism of rational choice theory is that it makes highly implausible claims about the epistemic specificity under which someone acts. It assumes that the agent is able to see through all possible future

contingencies, and that a decision is rational if it is optimal, given all future contingencies. It is thus often assumed that the agent acts in a 'small world' where her actions have only limited consequences, and hence that it does not matter how events outside of this small domain unfold.<sup>25</sup> Although this criticism is related to the limits rationality imposes on the model of human behavior, it is important to note that entrepreneurial actions differ from rational ones in a different sense. Entrepreneurial action is not a model of bounded rationality where the agent has limited foresight or faces unreduceable complexities. The difference between a rational and an entrepreneurial action is more radical. It concerns the way actions and attitudes can be described and claims that acting in the world changes the description of the things an agent might care about, and hence that we cannot talk independently of what the agent does and what she cares about.

The fact that the entrepreneurial model violates the independence between measured attitudes and the realization of actions has consequences for the application of various political and moral categories to entrepreneurial actions. Notions of transparency, accountability and responsibility presuppose that attitudes concerning the consequences of an action can be discussed and deliberated independent of whether the action is actually realized or not. The understanding of politics, as the execution of an ex-ante formed plan that describes the set of relevant contingencies, also builds on this independence. Similarly, understanding political actions

in relation to an idealized ex-ante agreement or contract is also less appealing if political actions correspond to innovations and their implementation constantly changes our understanding of what constitutes the domain of politics. Similarly, under the veil of ignorance one cannot specify the set of things people might care about when political action changes this set of things as it unfolds.<sup>26</sup> In the entrepreneurial model, politics as an innovative and entrepreneurial activity does not correspond to the execution of a plan rather the forces determining political change correspond to the disruption of an old and re-creation of a new stable epistemic domain for politics.

## **7. Action and Failure**

In the rational model, an agent fails if her action does not follow from her beliefs and desires, given her rule of action. If the agent chooses something that is contrary to what she overall desires and believes, then her action fails to be rational. Imagine that someone can choose between two medical treatments: the first offers full remission for sure and the second offers full remission with probability  $\frac{1}{2}$  and no cure with probability  $\frac{1}{2}$ . If we know that the agent only cares about remission and she understands the difference between the two medical treatments, then clearly whenever she chooses the second option she fails to follow any rational rule of behavior. Whenever we have knowledge of the agent's

attitudes – which as we have seen before, includes a knowledge of the right description of the consequences of her action – we can point to a failure in a rational action: a failed action is one that is not consistent with expected utility maximization or any other well-defined stable rule of the agent over her attitudes. Knowledge of the decision-theoretical space allows us to arrive at the conclusion that an action did not achieve the best possible outcome, in the same way, as it allows us to predict what the agent might possibly do in a given situation if she follows her rule of action.

There are, of course, alternative ways of understanding a failed action in the rational model. For example, if an agent's action did not achieve the best result for herself, either because some unforeseen intervention occurred, or because its execution was based on wrong beliefs, we can also call the action a failure. In these cases, however, failure is not linked directly to doing something that is not in accord with one's personal rule.<sup>27</sup>

Failure in the entrepreneurial sense cannot be discussed in the same way as failure in the rational sense can. Here, there might not be ex-ante measurable beliefs and desires ex-ante that someone fails to act upon. The description of the action, which is available only after the completion of this action, cannot be viewed as something, which entered into the rule determining the agent's action. The standard that the action creates does not exist without this action, and the same logical relation which established failure in the rational case, cannot be applied to an

entrepreneurial action. If an important set of desires and beliefs cannot be specified in the absence of a successful entrepreneurial action, we simply cannot say that the agent failed to act upon *those* beliefs and *those* desires at the time she decided to act the way she did. Similarly, we cannot say that the agent's *beliefs* and *desires* are not normatively coherent, if what "normatively coherent" is, is in fact affected by the realization of an action itself.

Failure in the entrepreneurial sense is not detectable in the way failure is detectable in case of a rational action. A perfectly neutral observer, such as the experimenter in the rational case, cannot make sense of the claim that an action was supposed to be entrepreneurial, but it failed to be one. Similarly, a neutral observer cannot, before the realization of an entrepreneurial action, identify that an action will be entrepreneurial. The information on beliefs and desires, identified by Ramsey's procedure, does not help us to notice an entrepreneurial action ex-ante. No matter how long the sequence of actions is which is observed prior to the one in question, this sequence does not give insight into whether the next action of the agent will be entrepreneurial or not. To identify an entrepreneurial action before its completion, we need something more than a neutral observer who follows Ramsey's procedure adopting a strictly speaking third person perspective. What is needed is access to unmeasured and *unmeasurable* motives that the agent has before she successfully completes an entrepreneurial action. A person including the agent herself,



might be able to guess that an action will produce something that is not yet available. There might be intuitions and guesses that allow one to anticipate that a course of action is motivated by incomplete or not fully discursive attitudes. Such an intuition requires a form of partiality and some non-rational component that cannot be adequately described from a neutral observer's perspective. Given such an intuition, one might point to some actions ex-ante, and recognize them as entrepreneurial.

Even without recognizing an entrepreneurial action ex-ante, it is possible to talk about failure given an entrepreneurial model. If someone's action fails to accord with any rational rule given ex-ante specified beliefs and desires, and it does not give rise to new well-formed descriptions, then we could say that the action was a failure. The action might fail to communicate anything and at the same time be inconsistent with any ex-ante rule of action. Importantly, this notion of failure requires an action to be a failure in the rational sense, and claims that if it could have had entrepreneurial consequences, it failed to meet this standard as well.

An alternative to a successful entrepreneurial action, however, is not necessarily a failed one. An action can be perfectly successful in a rational sense, but be based on a *routine*. If an action corresponds perfectly to an ex-ante fully specified plan i.e., if there is a characterization which pins down the consequences of this action for all possible contingencies in advance, it is likely to be a routine. If nothing happens as a result of this action that could not have adequately been described ex-ante, then this

action is the performance of a routine. The performance of a routine does not change the way things are viewed and described, and hence it is not a successful entrepreneurial action; yet neither is it a failed one.

The lack of entrepreneurship might go beyond particular actions and concern more the overall assessment of someone' activity or life. All of one's action can be rational yet fail to create any significantly new model of achievement. One can score perfectly on any pre-given test, while not creating a test, which reveals those unique problems that would not exists without this person and which he is uniquely qualified to produce.

Finally, a failure in rationality does not imply a failure in the entrepreneurial sense. An action might fail to achieve something that the agent believed and desired it would; yet this action might create new descriptions and these new descriptions might provoke new desires and give rise to new beliefs. A businessman who goes bankrupt, but creates a new model for enterprise, might fail in a rational sense, yet he might have successfully completed an entrepreneurial action that under different conditions will prove to be a role model for successful enterprise. A politician who designs a new welfare program might be in error in thinking that in this way he will gain new votes or solve the problem of unemployment. His actions might nevertheless create new institutions and new modes of policy-making that were unknown or were not part of what was considered to be politics.

## 8. Conclusion

In this paper, I distinguished between two models of action descriptions: rational and entrepreneurial. I argued based on Ramsey's theory of measurement that rationality can be understood not as a separate behavioral premise, but as a model of action description. The coherence property of beliefs and desires along, with the assumption that these attitudes produce actions according to a stable rule, allows us to see someone's behavior as rational. Importantly, such rational actions always take place in a world of unchanging and well defined event descriptions. In contrast to this model, entrepreneurial actions take place in a world where actions themselves change the available set of event descriptions. The entrepreneurial model points to an understanding of agency according to which someone acts under conditions that are not completely transparent to her, but under which her actions can lead to real innovation. Entrepreneurial action is not linked to particular people, such as Roosevelt or Napoleon. It is not a character trait, nor is it a sociological category that divides people into entrepreneurs and ordinary people. Rather, entrepreneurial activity, in my definition, is a characteristic of an action or of a plan. It points to an *idealized* set of properties that an action can have.

The fact that we describe an action as entrepreneurial does not mean that a rational description of this action is not possible. There are descriptions under which an entrepreneurial action can be portrayed as rational. The

description which describes the routine activity of an artist, such as selecting the colors moving the brush, as deriving from ex-ante well defined beliefs and desires is a rational one. And as I argued before, if we start from scratch, such a rational view of behavior is always possible. The entrepreneurial model of action description just points to a limitation of this rational view and offers an alternative one. It does not claim that actions are rational or entrepreneurial in character but that human behavior can be described according to different models. There is no single real action that could be characterized only as entrepreneurial, as every action may have descriptions that are standard and descriptions that are innovative. There are no fully entrepreneurial actions as there are no fully routinized actions either. The two go together like the Dionysian with the Apollonian in Nietzsche's account of the tragedy, or proper craft training with imagination in Kant.

Although I proceeded in a somewhat more analytical vein, the notion of entrepreneurial action has applications to our understanding of agency more generally. There many examples of entrepreneurial actions outside of fine art: in the domain of large-scale political action for example. The economic and social reforms of the New Deal, Bill Clinton's strategy of triangulation, the launching of the European Union, or the political franchise commonly referred to as Al-Qaeda can all be described as political innovations that had no parallels in politics before. These successful political actions clearly had components that were standard and

"right" in a particular situation. They also had consequences that reshaped our understanding of the political domain.

In a companion essay,<sup>28</sup> I apply the above distinction between rational and entrepreneurial action to politics in the context of the modern state. I argue that like the stable domain required to measure and define rational actions, the modern state, through its statistical activity, creates a stable domain for politics. Statistical activity not only measures things that constitute the knowledge of the state, but also creates a stable domain through creating modes of event descriptions. Such statistical activity is then indispensable for various notions of politics.<sup>29</sup> For example, notions of risk and insurance can only be understood relative to such a domain, since they require the description of the relevant set of consequences in advance. Furthermore, institutions that utilize standardized information or are based on various techniques of examination, registration and normalization all require the existence of such a stable domain. When political agency is organized in such a stable domain then I call it steady-state politics. In contrast to rational or steady state politics there is entrepreneurial politics where political action cannot ex-ante fully determine its grounds but, if successful creates a new category or a new rule.

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<sup>1</sup> Richard Wagner, *Die Meistersinger von Nürnberg* (1867) Act II.

<sup>2</sup> In this paper, I use the expressions rational choice theory and decision theory interchangeably. Also the term desire is akin to the term preference assuming constant beliefs.

<sup>3</sup> The best known of such empirical interpretations is the economic theory of revealed preference. Classical references in pure choice theory include Paul Samuelson, "A Note on the Pure Theory of Consumers' Behaviour." *Economica* (1938), 5: 61-71. For a current survey see Hal Varian, *Revealed Preference* mimeo (UC Berkeley, 2006). In the context of the belief-desire model that I discuss here, the classical references are Frank Ramsey, 'Truth and Probability' in *The Foundations of Mathematics and Other Logical Essays* (London, 1927), Bruno de Finetti "La Prevision: Ses Lois Logic, Ses Sources Subjectives" *Annals de l'Institute Henri Poincaré* (1937), 7: 1–68, John von Neumann and Oscar Morgenstern, *Theory of Games and Economic Behaviour* (Princeton, 1944), Leonard Savage, *Foundations of Statistics*, (New York, 1957) and Leonard Savage "Elicitation of Beliefs and Personal Probabilities" *Journal of American Statistical Association* (1971), 66: 783–801.

<sup>4</sup> Amartya Sen, "Rational Fools: A critique of the behavioral foundations of economic theory." *Philosophy and Public Affairs* (1977), Vol. 6, No. 4: 317-344. Amos Tversky and Daniel Kahneman, "Judgment under uncertainty: Heuristics and biases." *Science*, (1974), 185: 1124-1130.

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<sup>5</sup> 'Author' *Innovation and Steady-State Politics in the Statistical State* mimeo (2005).

<sup>6</sup> These points are developed in the classic work of Elisabeth Anscombe, *Intention* (Oxford, 1959), Elisabeth Anscombe, "Under a Description" *Nous* 13: 219-33; (1979) and Donald Davidson, *Essays on Actions and Events* (Oxford, 1980). For a related discussion concerning the methodology of social sciences see also Philip Pettit (1980) and John Dunn (1980) in eds.: Hookaway and Pettit *Action and Interpretation: Studies in the Philosophy of the Social Sciences* (Cambridge, 1980).

<sup>7</sup> Davidson (1980). pp. 100-101.

<sup>8</sup> See Carl Hempel, *Aspects of Scientific Explanations* (New York, 1965) pp. 479-481.

<sup>9</sup> See Richard Jeffrey, *Logic of Decision* 2<sup>nd</sup> ed. (Chicago, 1983) for a unified model where beliefs and desires are defined over the space of propositions.

<sup>10</sup> See e.g. Carl Hempel and Peter Oppenheim, "Studies in the Logic of Explanation" *Philosophy of Science* (1948), 15: 135-75 and Hempel (1965) pp. 472.

<sup>11</sup> On the general problem of measurement, especially axiomatic measurement in the social and behavioral sciences see the classic work of David Krantz, Duncan Luce, Patrick Suppes, and Amos Tversky *Foundations of Measurement, Vol. I Vol II. and Vol III.* (New York, 1971, 1989, 1990).

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<sup>12</sup> See Davidson (1980) and Donald Davidson, *Problems of Rationality* (Oxford, 2004).

<sup>13</sup> Ramsey (1931). For a summary and extension of Ramsey's method see Richard Bradley, "Ramsey and the Measurement of Belief" in D. Corfield and J. Williamson eds.: *Foundations of Bayesianism* (Kluwer, 2001).

<sup>14</sup> Davidson (1980) and Davidson (2004).

<sup>15</sup> For this observation, see also Amos Tversky, "Critique of Expected Utility Theory" *Erkenntnis* (1975), 9: 163-173. Tversky's remark is quoted in Davidson (1980) pp. 272.

<sup>16</sup> Arthur Danto, *Analytical Philosophy of History* (Cambridge, 1965) pp 151.

<sup>17</sup> Ian Hacking, *Rewriting the Soul: Multiple Personality and the Sciences of Memory* (Princeton, 1995) pp. 237-239.

<sup>18</sup> Immanuel Kant, *The Critique of Judgment* (Cambridge, 1987).

<sup>19</sup> Kant (1987) §43-§48.

<sup>20</sup> Kant (1987) §47 5: 309 pp. 187-188.

<sup>21</sup> This is precisely Plato's main objection to art.

<sup>22</sup> Theoretical research in economics departs from Savage's axioms, Savage (1957). Following the article of Daniel Ellsberg, "Risk, Ambiguity, and the Savage Axioms" *Quarterly Journal of Economics*, (1961), 75. No. 4: 643-669, formal economic theory distinguishes between risk where probabilities of the consequences are fully specified



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and uncertainty/ambiguity where no unique numerical probabilities are available. For a development of such a so-called Knightian decision theory see Truman Bewley, “Knightian Decision Theory: Part I.”, Yale University, Cowles Foundation Discussion Paper N. 807, (1986), and Truman Bewley, “Knightian Decision Theory: Part II.” Yale University, Cowles Foundation Discussion Paper N. 868, (1987). Note, however, that the way I use uncertainty here is different since uncertainty refers to the fact that certain consequences of the agent’s actions are not fully transparent i.e., that they cannot be part of a discursive plan. It is not, as it were, that the intensity of beliefs is undetermined but the consequences over which they are defined are not well-shaped.

<sup>23</sup> See Frank Knight, *Uncertainty, Risk and Profit* (Washington, 2002). I interpret Knight in a non-standard fashion because my aim is not to offer a correct textual interpretation, rather to illustrate my point with a particular interpretation of the Knightian entrepreneur.

<sup>24</sup> Knight (2002).

<sup>25</sup> See Savage (1957), especially his discussion on the idea of 'small worlds'.

<sup>26</sup> For a theory where choices under the veil of ignorance constitute the normative foundation of politics see John Rawls, *A Theory of Justice* (Harvard, 1971).

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<sup>27</sup> By an unexpected consequence, I mean a consequence that was not considered to be possible or more than minimally likely, nevertheless was realized as a result of the action.

<sup>28</sup> Author (2005).

<sup>29</sup> For similar discussions see e.g. Theodore Porter, *The Rise of Statistical Thinking, 1820-1900* (Princeton, 1986) and Ian Hacking, *Taming of Chance* (Cambridge, 1990).