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## Conventional and unconventional behavior under uncertainty

**Abstract:** *When discussing the relation between rationality and conventions under non-neoclassical uncertainty, almost all economists focus on the rationality of following a convention. This paper contributes to the construction of an alternative approach, which argues that conventions and rationality are compatible but reasonable behavior may be conventional or (partly) unconventional. The paper reviews several arguments for the reasonableness of following a convention. It then stresses the importance of factors such as creativity and an optimistic disposition to face uncertainty (animal spirits) and shows how these factors are crucial for determining whether behavior will be conventional or not.*

**Key words:** *animal spirits, complexity, conventions, innovation, rationality, uncertainty.*

A diverse group of heterodox schools of economic thought has emphasized the importance of uncertainty in the critique of neoclassical economics and in the proposal of an alternative theory, with uncertainty (variously) defined in a non-neoclassical sense. This group includes Post Keynesianism, Austrian economics, institutionalism (both “old” and “new”), behavioral economics, and the French conventions school. In contrast, it has been argued by some authors (e.g., Coddington, 1982) that the emphasis on uncertainty by the Post Keynesians, George Shackle and some Austrians leads, if applied with consistency, to theoretical nihilism. Presumably, the argument could apply to (some of) those other schools of thought as well. Either in direct response to the charge of nihilism or not, several heterodox economists have maintained that

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uncertainty means neither that “anything goes” nor that order and rationality are impossible. In support of this idea, many have used the notion of *conventions*.

Different concepts of rationality and of conventions have been used by different economists when discussing the relation between rationality and conventions. Various terms have also been employed, such as rules or institutions, instead of conventions, and reasonableness or sensible behavior instead of rationality, and so on. Indeed, this discussion is marked by an enormous conceptual complexity. Despite their conceptual differences, these economists have something in common: with very few exceptions, they all tend to focus on the rationality of *following* a convention (or a rule or the like). It is argued here that this is just one of two basic ways of approaching the relation between convention and rationality under non-neoclassical uncertainty so that *compatibility* between them is possible. This approach comes in different versions, and an extreme one would attempt to reduce each and every instance of conventional behavior to rational behavior (as some varieties of neoclassical economics and of new institutional economics try to do, with a weaker notion of uncertainty). The second approach, which has been vastly neglected so far and to whose construction this paper aims to contribute, is less restrictive: it argues that, especially under fundamental uncertainty (a non-neoclassical variety of uncertainty defined below), conventions and reasonableness<sup>1</sup> are compatible, but reasonable behavior may be *conventional* or (partly) *unconventional*. This approach may also appear in different versions, and we should support one that does not suggest that behavior, be it conventional or not, can always be reduced to reasonable behavior.

Only some of the necessary building blocks of this less restrictive approach will be considered here. The discussion of rationality under non-neoclassical uncertainty and its relation to conventions still awaits further progress in solving the problem of how to define rationality and how to relate it to knowledge in a situation characterized by a significant lack of knowledge. These are difficult conceptual questions, which shall be avoided as much as possible here. Instead, the intention of the paper is just to take a few initial steps toward a broad approach to rationality and

<sup>1</sup> At an anonymous referee’s suggestion, the term “rationality” is avoided here when referring to a non-neoclassical context. Instead, the terms “reasonableness” and, less often, “rationality under non-neoclassical uncertainty” are used (interchangeably), to indicate that this is not the neoclassical concept of rationality.

conventions under non-neoclassical uncertainty by showing, and in a few cases remedying, some deficiencies in the reigning heterodox approach. Useful points can hopefully be made without, or before, getting oneself caught in a mesh of difficult concepts. Similarly, the paper avoids the important but complicated discussion of whether rule-following is conscious or not and whether unconscious behavior can be considered as rational. For the purposes of the paper, it is more important to discuss the possibility that people may consciously deviate from rules or conventions followed by others, be they followed consciously or unconsciously.

### **Arguments for the reasonableness of following conventions**

#### *Complexity and limited mental capabilities*

Herbert Simon is perhaps the best known critic of the neoclassical concept of rationality. Simon (e.g., 1982) emphasizes the bounded rationality of agents with limited mental and computational capabilities operating in a complex environment. He argues for the rationality of following simple rules of thumb in this situation (more extensive comments on Simon are made in Dequech, 2001). Another author to emphasize the rationality of rule-following people with what he calls a competence-difficulty gap is Heiner (1983).

In the Post Keynesian literature, a similar rationalization of conventional behavior is most clear in Darity and Horn (1993, p. 29), who define convention as an individual rule of thumb: “Adherence to a rule of thumb appears—at least for a time—to make affairs manageable.” “There is no alternative that is, typically, more workable” (ibid., p. 32). “Workable” seems to mean here not too complicated.<sup>2</sup>

The rules of thumb considered by Simon, Heiner, and Darity and Horn may be followed by a single individual, whereas conventions are usually thought of as involving several people. The justification or rationalization of rule-following in terms of its workability for agents with a limited capability to deal with a vast and complex amount of information has also been defended by authors who deal with collective or socially shared rules.

<sup>2</sup> Even if he did not (at least not explicitly) define convention as a rule of thumb, Keynes (1936, p. 51) can be interpreted as using “workability” as part of his justification for the convention of projecting the present when forming short-term expectations in production decisions.

Rutherford (1994, pp. 59–60) and Perlman (1986, p. 272) point out ideas in this vein by old institutionalists such as John Commons, Wesley Mitchell, and J.M. Clark.

Hayek should also be mentioned here. At least some of the “systems of rules of conduct” discussed by Hayek (1962, pp. 46–48; 1967, pp. 66, 70, 78) are composed of socially shared rules (see also Langlois, 1992; Vromen, 1995, p. 170). We rely on rules “because our reason is insufficient to master the full detail of complex reality” (Hayek, 1960, p. 66; also 1965, pp. 88–89). This may be considered reasonable by Hayek, as he points out the importance of rule-following “[i]n order to live successfully and to achieve one’s aims within a world that is only very partially understood” (1967, p. 81).

It should be noted, however, that, first, Hayek’s rules are more generic and vague than what most other authors mentioned in this paper call rules or conventions. For Hayek (1962, pp. 56–57), rules do not refer to specific actions. Particular actions are determined by a *combination* of different abstract rules, as distinct from a single rule (see also Hayek, 1969, p. 40).<sup>3</sup> Second, Hayek’s rules are not oriented toward an end or purpose (unlike Post Keynesian conventions or Simon’s rules of thumb, for example). Third, Hayekian agents may not be consciously aware of the rules they follow. All this complicates the discussion of reasonable behavior.

The Hayekian line of rationalization of rule-following behavior has been developed by Vanberg (1993), Langlois (1986), and others.

### *The possibility of unevenly distributed information*

In the article where Keynes most extensively discusses the following of conventions under uncertainty, he writes, as a justification for conforming to the average or majority opinion: “Knowing that our own individual judgement is worthless, we endeavour to fall back on the judgement of the rest of the world which is perhaps better informed” (Keynes, 1937, p. 114). This argument is based, thus, on the possibility that some people have some information that other people do not have (this is not, however, the kind of information often assumed to exist in neoclassical discussions of asymmetric information).

Keynes’s suggestion has been taken up most notably by members of the French school of “the economics of conventions.” For example,

<sup>3</sup> Perhaps one could then infer that rule-guided behavior in Hayek’s sense may be unconventional, if a convention is understood not as a synonym for one of Hayek’s generic rules (as Hayek himself seems to interpret it) but as a more specific, single rule.

Orléan (1987, pp. 163–164), followed by Dupuy (1989, p. 372), argues that imitation is the last rational option to which agents can resort when they know nothing, for in this situation imitating others cannot worsen an individual's performance. Either (1) other people share the individual's ignorance and thus his or her situation does not change if he or she imitates the others or (2) other people know something and then the imitator's situation improves.

#### *Self-fulfilling prophecy*

Possas (1990, pp. 11–12) argues that it may be reasonable to follow the average opinion because it may indicate “a convergence, and, as such, a probable market trend” of the variables considered (also Favereau, 1998, p. 227).

In this argument, the average opinion seems to represent the best expectation about future results in a particular market, and to follow the convention is to try to make the right guess. This argument logically depends on the potentially self-fulfilling character of the average opinion. Keynes could perhaps be seen as applying this to the expectations about the interest rate.<sup>4</sup> At any rate, Possas (1990, p. 23n) believes that the average opinion can represent a likely trend of product markets under some stable conditions.

#### *Defensive behavior*

Within Post Keynesian economics, it has been maintained that “the safest course of action may simply be to follow the crowd” (Hamouda and Smithin, 1988, p. 281) and that “there are less chances of getting burned when one is following the crowd” (Lavoie, 1992, p. 57). Similarly, for Hayek, it is “important to obey certain inhibiting rules which prevent one from exposing oneself to danger” (1967, p. 81).

There have been a few different and more specific ways to justify following a convention by saying that this is defensive behavior in conditions of uncertainty.

Lawson (1991), for example, centers his analysis of conventional behavior on the projection of the present and recent past into the future, mentioned by Keynes (1936, 1937) and considered by Lawson an example of

<sup>4</sup> Referring to the rate of interest as a conventional phenomenon, Keynes writes: “its actual value is largely governed by the prevailing view as to what its value is expected to be. Any level of interest which is accepted with sufficient conviction as likely to be durable *will* be durable” (1936, p. 203, emphasis in original). See, however, the comments below on the notion of convention in financial markets.

a convention. Lawson confines this defensive-behavior argument to the decision of “investing” in financial markets. Holding to the projective convention allows this “investment” to be made safe (1991, pp. 194, 207). Lawson supports this argument with Keynes’s (1936, p. 152) reference to “organised investment markets” where “investments” are made liquid for the individual, although not for the community as a whole, as long as the individual can “rely on the maintenance of the convention.”

Conventional behavior has also been rationalized as a defense against uncertainty because it represents for the individual a potentially successful attempt to preserve his or her position relative to other participants in the relevant market, since the individual will be behaving in a manner similar to these other participants, on average. Possas (1987, pp. 133–134) makes this type of argument in his analysis of conventional behavior in the investment decision (in product markets).

The defensive-behavior argument is sometimes associated with the idea, accepted by Keynes (1973, pp. 124–125) and Hayek (1967, p. 79), that people are led to follow conventions because of a psychological need for regularity.<sup>5</sup> This association has been made, for example, by Hayek himself (1967, p. 79) and Lawson (1995, p. 95). Neither Hayek nor Lawson discusses this in purely psychological terms, however. Despite Hayek’s references to “the fear of the unknown” and “panic,” the preference for rule-following also arises from the knowledge that there are rules. Hence, there is “a sort of connection between the knowledge that rules exist in the objective world and a disinclination to deviate from the rules commonly followed in action” (Hayek, 1967, pp. 79–80). Similarly, Lawson (1991, p. 200; 1995, pp. 94–95) refers to epistemic reasons for projecting the present and the recent past into the future (the kind of convention on which he focuses).

### *Convention as induction*

Rod O’Donnell (1989) and Gay Meeks (1991) are among the main defenders of the view, which they sympathetically attribute to Keynes, that it is reasonable to use induction as a guide for action under uncertainty. For example, O’Donnell (1989, p. 250) argues that, in Keynes’s theory of expectations, “the primary notion is that expectations are generally

<sup>5</sup> Keynes wrote: “Peace and comfort of mind require that we should hide from ourselves how little we foresee” (1973, pp. 124–125). See also Crotty (1994, pp. 119–120), who seems to accept Keynes’s argument. Winslow (1992, p. 110) also sees this psychological factor as Keynes’s justification for conventional behavior, but, unlike Lawson and Crotty, argues that for Keynes this is a source of irrationality.

based on *induction*,” which Keynes had in mind when he wrote of projecting the existing situation into the future (see also Meeks, 1991). These authors support their view with Keynes’s statement that “[i]t is reasonable . . . to be guided to a considerable degree by the facts about which we feel somewhat more confident, even though they may be less decisively relevant than other facts about which our knowledge is vague and scanty” (1936, p. 148).

To the extent that in this argument the projection of the existing situation can be associated with a convention,<sup>6</sup> then conventional behavior would be seen as reasonable behavior.

### *Avoidance of disapproval*

Sociologists have often discussed the following of social norms, which are conventions with a normative content, as based on an internalized sense of moral obligation. In this case, norm-guided behavior is not instrumentally directed to the pursuit of any objective. Sometimes, however, the following of conventions can be justified by the idea that this behavior is reasonable if one is pursuing a particular objective: to avoid the disapproval or criticism of others, or even ostracism. If this is the ultimate objective, conventional or norm-guided behavior will achieve it almost by definition.

A possible example of this in economic decisions is the one about which Keynes writes: “Worldly wisdom teaches us that it is better for reputation to fail conventionally than to succeed unconventionally” (1936, pp. 157–158; see also Davidson, 1994, pp. 237–238; Lavoie, 1992, p. 57; Lawson, 1991, pp. 217–218; for a formal discussion, in varied contexts, see Scharfstein and Stein, 1990).

Hayek (1967, p. 78) also mentions the possible nonacceptance by the other members of a group as a deterrent to deviant behavior. In Hayek’s view (*ibid.*, p. 80), this sort of argument is not separate from, but rather closely related to, the argument (discussed in the subsection “Complexity and Limited Mental Capabilities) that rule-following reduces uncertainty.<sup>7</sup>

<sup>6</sup> It can indeed, because these authors do not explicitly define convention. Following Keynes (1973, p. 124), O’Donnell (1989, p. 254) refers to the “inductive process described above” as a convention. On another occasion (*ibid.*, p. 261), he follows Keynes’s 1937 *QJE* article association between conventional judgment and imitation of the majority. The same applies to Meeks (1991).

<sup>7</sup> As noted, Hayek also establishes a similar cognitive connection in the case of the psychological need for regularity, which he sees as a deeper, more basic force than the fear of punishment.

## The importance of the concept of uncertainty

Specifying the type of uncertainty considered is crucial for discussing the relation between conventional behavior and reasonableness. Dosi and Egidi (1991) have distinguished between substantive and procedural uncertainty. Substantive uncertainty results from “the lack of all the information which would be necessary to make decisions with certain outcomes.” In contrast, procedural uncertainty arises from “limitations on the computational and cognitive capabilities of the agents to pursue unambiguously their objectives, given the available information” (*ibid.*, p. 145).

The concept of uncertainty that prevails within neoclassical economics focuses on the substantive kind of uncertainty. This is, however, a notion of weak uncertainty, which must be distinguished not only from procedural uncertainty but also from strong uncertainty (Dequech, 1997). Strong uncertainty, in contrast to the “weak” uncertainty of Savage’s standard expected utility theory and to Knight’s risk, is characterized by the absence of unique, additive, and fully reliable probability distributions. This can be seen as a distinction between weak and strong types of what Dosi and Egidi call substantive uncertainty.

Another useful distinction is the one established in Dequech (2000b) between two types of strong (substantive) uncertainty: ambiguity and fundamental uncertainty. Unlike ambiguity (which is not particularly important for the purposes of this paper), fundamental uncertainty is characterized by the possibility of creativity and non-predetermined structural change, so that the list of possible events is not predetermined or knowable *ex ante*.

A notion of procedural uncertainty is implicitly used by Simon, Hayek, and others who point out the (bounded) rationality of rule-following when the complexity of the environment is too large in relation to the agent’s mental capabilities.<sup>8</sup> Evaluating this argument depends crucially on one’s conception of economic reality. In the case of procedural uncertainty, economic reality is complex and populated by individuals with

<sup>8</sup> This is the type of uncertainty emphasized by these authors, despite a few brief references that smack of fundamental uncertainty—for example, Simon (1982, p. 297), Hayek (1960, p. 29; 1965, p. 90) and Vanberg (1993, p. 193). Although Keynes focused on the following of conventions, he pointed more clearly to a notion of fundamental uncertainty (1973, pp. 113–114, 287, 309). In Hayek’s case, the above-mentioned determination of a particular action by a combination of different abstract rules may open room for creativity, and, consequently, for fundamental uncertainty, since it allows a structure of actions “to produce new actions it has never produced before, and therefore to produce altogether new behaviour” (Hayek, 1969, pp. 48–49).



limited mental and computational capabilities. This characterization is compatible with different concepts of reality in terms of the (im)possibility of non-predetermined structural change and of creative individual behavior. Accordingly, there are two alternative views of procedural uncertainty. If that possibility is recognized, the notion of procedural uncertainty is compatible with, and complementary to, the notion of fundamental uncertainty. Reality is both complex and, as to use Davidson's (1996) term, transmutable. This is the view defended here. Alternatively, that possibility may not be recognized. The latter variant of procedural uncertainty (which is the one ably criticized by Davidson, *ibid.*, under the heading of "epistemological uncertainty," and by Dunn, 2001, who prefers to write that "bounded rationality is not fundamental uncertainty") is incompatible with fundamental uncertainty.

The complexity argument would be most pertinent in cases of the second variant of procedural uncertainty, but when fundamental uncertainty is involved (possibly in combination with the first variant of procedural uncertainty), this argument overemphasizes rule-following and overlooks rule-breaking. Thus, it either neglects the connection between unconventional behavior and reasonableness or implies that unconventional behavior is not reasonable. It may lead to a theory that, at most, allows the individual to adapt to some external change, whereas the view consistent with the notion of fundamental uncertainty is one in which unconventional behavior (among other factors) endogenously creates change.

Fundamental uncertainty also restricts the applicability of the argument based on the possibility of unevenly distributed information. It is true that, if fundamental uncertainty does not imply complete ignorance, some people may be better informed than others. However, if decision-makers are aware of fundamental uncertainty, they know that other people also lack some knowledge. Consequently, what other people think is not totally reliable. Moreover, a decision-maker also has to consider that other people may be *less* informed than he or she is. Orléan and Dupuy rightly restrict their argument by assuming that the imitating individual knows nothing about the particular phenomenon he or she is trying to evaluate. The individual is not really completely ignorant, however, if he or she knows how others are behaving.

The concept of reality underlying the notion of fundamental uncertainty implies limitations for other rationalizations of conventional behavior as well. This should be clearer after we examine more specifically the induction and the defensive-behavior arguments in light of the possibility of innovative behavior (in the fourth section). At this point, a more general comment refers to these as well as to all the other above-mentioned

rationalizations of conventional behavior (and potentially to rationalizations of unconventional behavior, such as the one suggested in this paper). In situations where people can be truly creative and which therefore involve fundamental uncertainty, a problem may become especially serious: not knowing what the other people will do.

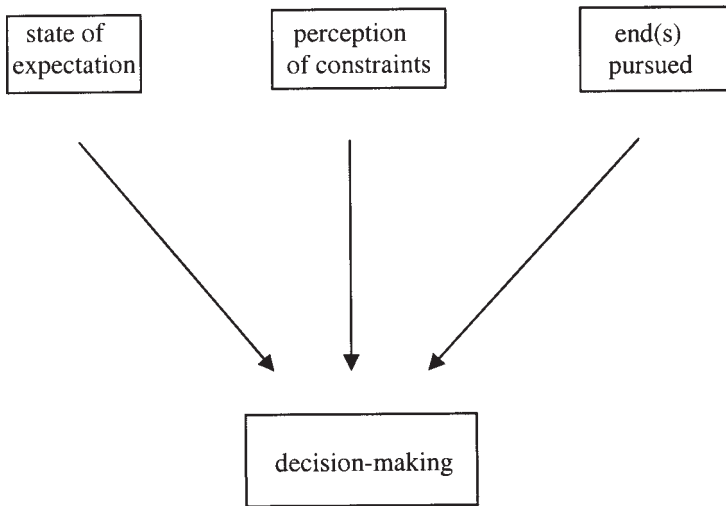
### **The determinants of decision-making under uncertainty**

People may not always act in pursuit of some end, but, when they do, understanding their behavior depends on the end(s) that people are supposed to pursue. If we leave aside a discussion of the choice of ends, decision-making under uncertainty can be seen as depending on the state of expectation, the end(s) pursued, and the perception of constraints (see Figure 1, where the arrows indicate a relation of determination).

Considering the state of expectation in some more detail will be particularly useful for the discussion in the next sections. Keynes (1936, p. 148) introduced the notion, but did not explicitly define the state of expectation. It is understood here as *expectations as a guide to practical action*, that is, as *a combination of expectations proper and confidence*. The theory of expectations and confidence proposed in Dequech (1999) and drawn upon here is inspired by Keynes, but goes beyond what he wrote. One can understand the meaning and the determination of expectations and confidence as follows. Expectations proper are the best estimates or forecasts one can form about some events, with confidence taken to mean the disposition to act on the basis of these expectations while considering the uncertainty involved. Confidence refers to (1) the consideration of the likelihood that things may turn out to be different from what one expects,<sup>9</sup> because the evidence on which expectations are based is incomplete, and (2) the disposition to behave according to expectations despite this possibility.

*Expectations and confidence* may be called the *immediate* determinants of the state of expectation (see Figure 2). This is represented in the bottom part of Figure 2, namely, in the three lower boxes. The *ultimate* determinants are three: *knowledge*, *creativity*, and *the optimistic disposition to face uncertainty*.

<sup>9</sup> This is a paraphrase of the passage in which Keynes relates confidence to “how highly we rate the likelihood of our best forecast turning out quite wrong” (1936, p. 148). A few paragraphs later, Keynes (*ibid.*, p. 149) also relates confidence to “business psychology,” which is reflected in the next factor to which confidence is connected here.

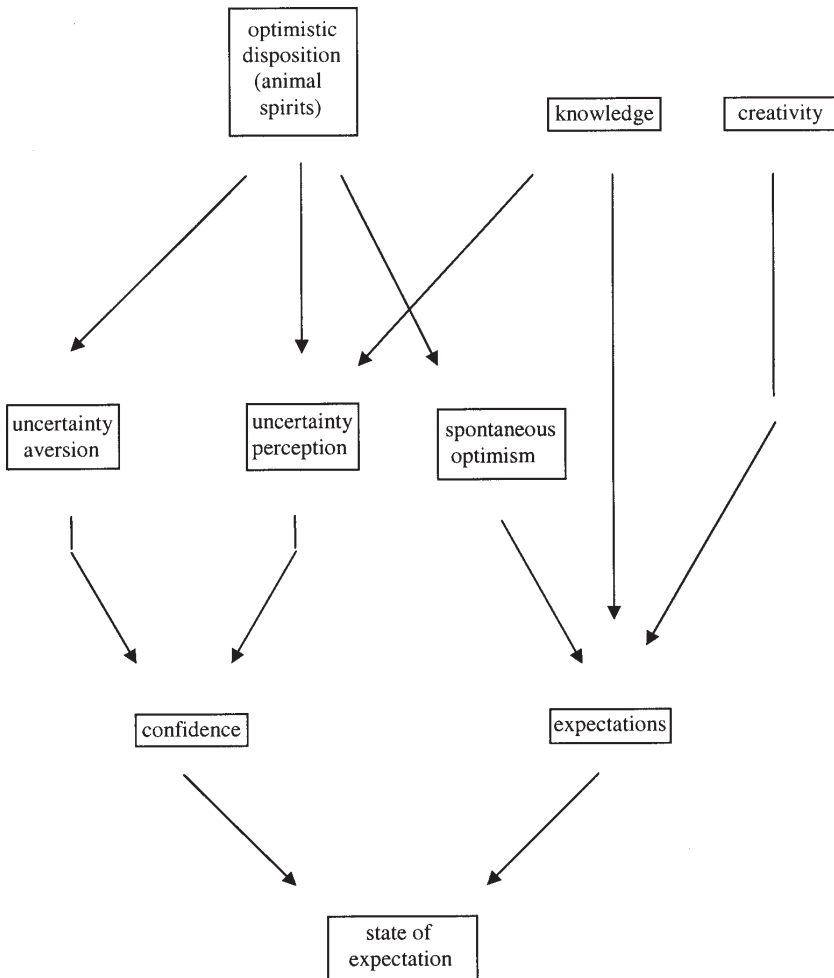
**Figure 1** The determination of decision-making

What people know is based on the information available to them or learned through practice, without necessarily being discursively dealt with. It is not particularly important for our purposes to discuss exactly what knowledge is. Most important of all is that knowledge be seen as limited under fundamental uncertainty, so that other factors need to supplement it. In the formation of the state of expectation, these other factors are the optimistic disposition to face uncertainty and creativity.

The optimistic disposition to face uncertainty (animal spirits redefined) is a broad notion encompassing different elements. The expression “animal spirits,” as redefined in Dequech (1999), does not mean merely “a spontaneous urge to action rather than inaction” (Keynes, 1936, p. 161). The idea to be conveyed is that of a disposition that comes in (ordinal) degrees and is combined with optimism or pessimism.

Creativity is interpreted here as an ability to see and do things in a novel way. Each person’s creativity may be strong, weak, or even absent. Creativity in expectations is expressed as an innovative imagination, that is, as the ability to imagine a future that is, at least in some aspects, radically different from the present (or, if creativity is weak, a future that is in all aspects essentially similar to the present).<sup>10</sup>

<sup>10</sup> An innovative imagination is, of course, a favorite topic of George Shackle’s.

**Figure 2** The determinants of the state of expectation

The best example of creativity applied to conduct in the economic sphere is the introduction of innovations. However, innovations are not an example, or the result, only of creativity. A strong creativity has to be combined with a good deal of knowledge and a fairly strong disposition to face uncertainty, for an innovative action to happen.

Spontaneous optimism (or pessimism) means optimism (or pessimism) that is not based on any knowledge. It is the factor through which the optimistic disposition indirectly influences expectations. Expectations are directly determined by knowledge, spontaneous optimism, and creativity.

Confidence is ultimately determined by the optimistic disposition and knowledge, through their influence on the two factors on which confidence directly depends: how much uncertainty a person perceives and how willing the person is to face or to avoid this uncertainty. These two factors are termed, respectively, *uncertainty perception* and *uncertainty aversion* (or *willingness to face uncertainty*).

### **An alternative approach: a first approximation**

In order to show that the relation of compatibility between conventions and rationality under non-neoclassical uncertainty should not be restricted to the case in which people follow conventional behavior, one can start with a question: What about, for example, the innovative Schumpeterian entrepreneur or firm?

This question is pertinent to the examination of all the above-mentioned arguments for the reasonableness of conventional behavior. Indeed, the possibility of innovative behavior is a major feature of the conception of reality underlying the notion of fundamental uncertainty and a major reason why those arguments have limited applicability to such a reality. Consider, for example, the argument that to follow a convention is a reasonable defensive procedure or that it is reasonable to conventionally project the existing situation into the future. To such an argument one can reply that innovative behavior is aggressive rather than defensive (or that the best defense is offense) and implies breaking with the past and the present.

Innovative behavior is at least in part unconventional. Indeed, it is difficult to think of a person who behaves in a completely unconventional way. There are so many conventions, and it is difficult to break with all of them at the same time.<sup>11</sup> The Schumpeterian entrepreneur or firm will normally continue following some conventions while breaking with others. An innovation implies breaking with conventional ways of doing some things, but this does not necessarily violate many other conventions that exist within a firm, regarding, for example, rights, duties, fairness, hierarchy, accounting practices, and so on. In terms of demand expectations, the innovative decision-maker may project the existing situation into the future regarding the aggregate level of economic activity, while breaking with the convention of projecting the

<sup>11</sup> As Chesterton puts it, “a man must be orthodox upon most things, or he will never even have the time to preach his own heresy” (1989, p. 364).

firm's current level of demand into the future, because of an expectation that an innovation will increase the demand for the firm's product.

The neglect of behavior that is in part unconventional is a major limitation of the literature that has argued for the rationality of conventional behavior under non-neoclassical uncertainty. Grellet (1976, p. 203), followed by Lavoie, states that "an entrepreneur with 'animal spirits' which are more optimistic than those of the group constituting the rest of the entrepreneurs is necessarily penalized. . . . [I]t is in the interest of each entrepreneur not to be too optimistic, or at least, not more optimistic than the other entrepreneurs" (1992, p. 232; Lavoie's translation). As should become clear below, this does not seem an adequate argument (except perhaps in a one-sector model, such as Lavoie's<sup>12</sup>). No more appealing, at least as a general proposition, is Favereau's idea that "rationality itself obliges one to be conventional" (1988, pp. 154–155). Other authors who have focused on the rationality of conventional behavior may not be so extreme as to explicitly identify conventional behavior as the only rational option under non-neoclassical uncertainty. Even so, they have not argued for the compatibility between rationality and unconventional behavior (nor suggested in which sense this compatibility is possible).

The compatibility between convention and the reasonableness of individual behavior does not necessarily depend on the following of the convention by the individual. For example, conventions may provide the individual with knowledge about the likely behavior of others. A person can use this knowledge to either follow the convention or to intentionally *flout* the convention, going against the stream.<sup>13</sup> The person may intentionally do something different from what he or she has some reason to expect that others will do. The innovator, for example, expects, perhaps reasonably, that others will continue doing what they have been doing, so that he or she can hopefully benefit from behaving differently. The approach proposed here is broad in the sense that it incorporates the possibility of going against the convention, while preserving the compatibility between reasonableness and the existence of the convention.

Depending on how rationality under non-neoclassical uncertainty is defined (which in turn depends on the relation established between ra-

<sup>12</sup> In other cases, an entrepreneur's competitors are not in general the same agents whose expenditures will generate a demand for that entrepreneur's products, and the expectations of the entrepreneurs of a given sector, which are those most relevant for the definition of a convention, are not in general self-fulfilling prophecies.

<sup>13</sup> New ways of doing things may also emerge unintentionally, as a result of mistakes in following conventions.

tionality and knowledge), whatever knowledge people have, including their knowledge of conventions, may allow behavior under this kind of uncertainty to be rational—or at least partly rational. Rationality may involve using the information or knowledge provided by conventions, but it is not determined by the conventional or unconventional character of behavior per se.

At the same time, when the outcome of someone's behavior depends on other people's behavior, there often is uncertainty as to this outcome because there is uncertainty as to what other people will do. People might break with a convention that they had followed hitherto and that matters for someone's outcome. People may also reevaluate and change their ends; even if they provisionally accept a certain end, they may devise new ways of doing things, so that the means to achieve some end are not given. Thus, whatever knowledge one can have under uncertainty, it is limited.

### **The optimistic disposition to face uncertainty, creativity, and convention**

Given people's knowledge, including knowledge of conventions, their behavior in the pursuit of whatever ends they accept will depend on their optimistic disposition to face uncertainty and on their creativity.

As with any decision to act under uncertainty, to follow a convention often requires a considerably strong optimistic disposition to face uncertainty (contrast this with Rogers, 1997, p. 330). If this optimistic disposition is weak, the person violates the convention by doing nothing and postponing an active decision. In economic contexts, this postponement involves (as explained below) a decision to improve one's liquidity position. At the other extreme, there may be a type of behavior that implies violating the convention in the other direction and requires an extraordinarily strong optimistic disposition to face uncertainty, an optimistic disposition stronger than the one underlying conventional behavior.

Furthermore, the adoption or not of conventional behavior depends also on creativity—or the lack thereof. Very often, people behave conventionally because they just cannot conceive of an alternative way of doing things.<sup>14</sup> In contrast, people with a strong creativity tend to be unconventional. Not only can they do something, instead of indefinitely

<sup>14</sup> This explanation for (as distinct from a rationalization of) conventional behavior has often been neglected by economists. It can be related to the fact that conventions influence the very way in which we perceive reality. In other words, they perform what I have called a deeper cognitive function than the provision of information.

postponing a decision, but they can do something different from the convention. Creativity may be manifested in expectations, as well as in people's perception of constraints (as unconventional behavior often results from a person's rejection of the constraints imposed by social standards) and in the ends they accept.

Thus, unconventional behavior may result from strong creativity (which may generate unconventional knowledge) or from an unconventional confidence or from an unconventional spontaneous optimism.

Lawson seems to be correct, therefore, when arguing that "falling back on convention is not all the story. For there may be alternative reasonable [or perhaps *partly* reasonable] courses of action, with the choice among them ultimately also influenced by factors such as animal spirits, sentiment or chance. . . . [R]ule systems and social structures such as conventions provide enabling (and constraining) conditions that facilitate certain courses of action, but the actual choice among possibilities remains open. It is a matter of human agency, involving the play of animal spirits and the like" (1991, pp. 194, 212). Indeed, a more detailed account of what is involved in the choice between following and flouting conventions is an intended contribution of the present paper.

Strong creativity and animal spirits may lead to innovative behavior. Therefore, we should not generalize to all human beings at all times the attribution of a psychological need for regularity or to control anxiety. Otherwise, we could not explain the existence of the Schumpeterian entrepreneur or other individuals who break with some conventions.<sup>15</sup>

### **In search of pecuniary gain**

Most of what has been argued so far applies to many contexts in social life. Let us now concentrate on economic contexts and, even more specifically, on situations in which people's accepted objective can be seen as pecuniary gain. Potential examples of such situations are the decisions concerning investment, production, and portfolios.

<sup>15</sup> Keynes is somewhat ambiguous about this. He writes that "none of us" could do without the convention of projecting the past, but then states, in less generalizing terms, that "most of us" offer "a great resistance to acting on" the idea "of the future being different from the past" (1973, p. 125). This allows a few exceptions. Furthermore, Keynes, in some instances (such as the passages mentioned above where he pointed toward a notion of fundamental uncertainty), connected the unpredictability of the future with, for example, the possibility of inventions. This implies recognizing that someone may at least sometimes, and regarding some conventions, be unconventional. Hayek (1979, pp. 161, 167) also discusses the role of individuals who deviate from traditional rules and experiment with new practices (see also 1960, p. 63, with special reference to moral rules).



In Dequech (2000a), the analysis of the state of expectation has been combined with a general perspective in which liquidity considerations are important for asset choice as a whole. Liquidity preference is inversely related to the confidence the decision-maker has in his or her estimates of the total returns from holding less liquid assets. Let us apply this previous discussion of the state of expectation and of asset choice to the analysis of conventional/unconventional behavior.

Let us examine, for example, the context of product markets. In this context, consider initially the case of the investment decision. Capital goods are one among several types of asset from which to choose, and the choice involves liquidity considerations. Liquidity preference is inversely related to animal spirits regarding the purchase of capital goods. The weakness of animal spirits reduces the relative attractiveness of capital goods, for it leads the individual decision-maker to attribute a high liquidity premium to liquid assets due to high uncertainty aversion and low confidence, and to have low expectations of profits due to little spontaneous optimism (or even to spontaneous pessimism). In an extreme case, this leads the individual to absolutely prefer liquidity, that is, to decide not to do anything, indefinitely postponing a decision. If there exists a convention, for example, of keeping investment as in the recent past, or a convention to increase investment, the weakness of animal spirits causes a person to violate this convention and prefer more liquidity than those who follow the convention. Animal spirits are thus needed if the person is to follow this convention.

At the other extreme, flouting the convention in the opposite direction may result from even stronger animal spirits than are needed to comply with it. This would be the case of aggressive behavior, according to which an individual with a relatively high optimistic disposition to face uncertainty uses whatever available information or knowledge—provided by the convention—about the likely behavior of others to try to obtain an extraordinary profit, by going against the average opinion. A decision-maker may need extraordinary animal spirits to contradict the convention in this direction. One example is that of a person or firm who decides to make an investment that involves increasing capacity more than others are increasing theirs. Another example is the Schumpeterian entrepreneur or firm.<sup>16</sup>

<sup>16</sup> The need of unusual animal spirits to innovate is also pointed out by Freeman and Soete (1997, p. 251). Innovative behavior is a good example with which to contradict Grellet's (1976) claim that it is always against an entrepreneur's interest to be more optimistic than the other entrepreneurs. Such a claim would imply that Schumpeterian entrepreneurs behave against their interests.

The innovative entrepreneur or firm is also the best example of how the adoption or transgression of conventional behavior depends on creativity, although creativity is not restricted to imagining innovations.<sup>17</sup>

The profit that such an unconventional decision-maker tries to obtain is extraordinary, that is, larger than those expected by his or her conventional competitors. When the payoff of unconventionality may be larger than that of imitation, a problem arises for the argument that fear, uncertainty aversion, or the like would lead people to follow conventions. Even if it could be argued that flouting a convention involves more uncertainty than following it, and if all decision-makers were equally uncertainty-averse, some of them could still choose to flout a convention in the hope of earning a larger payoff.

Still in the context of product markets, consider now the production decision. From the perspective adopted here, any decision to commit financial resources in a product market operation (i.e., in Keynes's expression, "to do something positive," 1936, p. 150) that involves uncertainty requires animal spirits. Not only to invest, as customarily recognized in the Post Keynesian literature, but *also to produce*, animal spirits are necessary. The need for animal spirits in production decisions results from the same factor that makes convention a useful notion in this context: the uncertainty involved in short-term expectations.

Following a current convention to keep production as in the recent past, or a convention to increase production, requires animal spirits. Again, the lack of animal spirits leads the individual agent to prefer liquidity and break with this convention. Violating the convention in the opposite direction may require even more animal spirits than are needed to comply with it. An aggressive strategy in search for extraordinary profits is also possible in the production decision. In the context of this decision, therefore, an entrepreneur who decides to not comply with the average opinion of the producers in that market and produces at a higher level of existing capacity than the average should also be characterized as someone with particularly strong animal spirits.

The decision to introduce organizational (or managerial) innovations, which involves a kind of Schumpeterian entrepreneur, should also be mentioned. This decision, not easily classified as a traditional investment or production decision (although it is closer to the former category

<sup>17</sup> A potential inconsistency may be identified in the work of some Post Keynesians who simultaneously overemphasize conventional behavior and accept Paul Davidson's conception of uncertainty. They seem not to notice that Davidson (1982–83, pp. 192–193) stresses the role of the Schumpeterian entrepreneur in his discussion of uncertainty.

when it is an attempt to permanently increase productive capacity), also requires animal spirits.

Leaving the context of product markets, a similar kind of reasoning is applicable to financial markets (including the stock exchange and bank lending), since financial assets too do not have all the same degree of profitability and liquidity, even if they all have a high degree of liquidity relative to nonfinancial assets.

Imagine, for example, that the average opinion is that prices in the stock market will rise. A person with a very weak optimistic disposition to face uncertainty will prefer the complete liquidity of money. Following the average opinion requires an optimistic disposition strong enough to make someone depart from the liquidity of money. At the other extreme, there may be some people who attempt to gain from speculating against the average opinion and selling short in the futures market. This may require a stronger optimistic disposition than the one underlying conventional behavior. These people can be said to be optimistic in the sense of hoping to obtain profit, although they are more pessimistic than the average opinion concerning the expected future prices of assets.

Like the Schumpeterian entrepreneur in product markets, the speculator in financial markets may be an example of unconventional behavior, one that received a good deal of Keynes's attention (more than the innovator—but see note 15). This is a somewhat peculiar example, however, for two reasons. First, the speculator can be seen as someone who believes not only to know “better than the market what the future will bring forth” (Keynes, 1936, p. 170), but, more specifically, to be able to “outwit the crowd” (*ibid.*, p. 155), “to guess better than the crowd how the crowd will behave” (*ibid.*, p. 157). Thus, the speculator does not follow the *current* average opinion and in this sense may be considered unconventional, but he or she tries to “act in the same way” as the crowd (i.e., to follow the average opinion) “*a short time ahead*” (Keynes, 1971, p. 324, emphasis added). Second, in the case of financial markets it may be difficult to identify exactly the convention with which one could break. As Keynes (1936, p. 172) notes, there may be greatly divergent opinions in these markets, making an average opinion less meaningful. Moreover, the relative number of speculators may be quite large. With the latter situation in mind, Keynes (*ibid.*, pp. 157–158), when presenting his version of the above-mentioned reputation argument, characterizes the *non*-speculator (“the long-term investor”) as “unconventional.”

In sum, the approach to convention and reasonableness to which this paper aims to contribute is broad in the sense that it applies to different markets and envisages different types of behavior that potentially exhibit

a relation of compatibility between convention and reasonableness. Suppose that following a convention means committing resources in an illiquid form (or accepting a liability that will later require liquidity). Whether a person or firm will follow this convention and, if not, in which direction the person or firm will deviate from the convention depends on the optimistic disposition to face uncertainty and on creativity.<sup>18</sup>

Each of these options is potentially compatible with reasonableness because knowledge of conventions may be employed.

At the same time, with the limitations of knowledge (including knowledge of conventions) under uncertainty, none of the options above is known to be the most adequate to the attainment of the end of pecuniary gain, even if one of them could be argued to be the best means to a specific, shorter-term end.

A decision that is reasonable given the end of pecuniary gain will not necessarily be so if the decision-maker is assumed to pursue a different objective, such as avoiding criticism or protecting his or her reputation. Moreover, a person may pursue different and potentially conflicting ends. The combination of reputation and profit considerations, in particular, is quite complex. Succeeding unconventionally is not necessarily harmful to a person's reputation. At any rate, under fundamental uncertainty there are serious doubts about the likelihood of success.

### **Additional related literature**

The concern with unconventional aspects of economic behavior underlies the difference between the approach adopted here and the one associated with Lewis's (1969, pp. 42, 58) restrictive definition of a convention, which has been used by other authors, especially in game theory. This definition requires everyone to conform to the convention when there is an expectation that others will do the same (although Lewis is not always so restrictive—see *ibid.*, p. 78).

Closer to the spirit of this paper are a few works that have argued for the rationality of innovation. See, for example, Bianchi (1990), Vercelli (1991), and Kasper and Streit (1998). Langlois should be mentioned

<sup>18</sup> Rotheim (1995, pp. 173–174) states that people follow conventions but also make conscious decisions to deviate from conventional behavior when their confidence in stability of the conventions breaks down. It has been argued here that conscious deviation from conventional behavior can also be caused by a high confidence. People who act unconventionally may have a high confidence in the permanence of the convention as well as in their own unconventional expectations.

again at this point, for he defends a research program that would admit several kinds of “reasonable action in certain situations, including satisficing (in the narrow sense), rule-following behavior, entrepreneurship (in the sense of Kirzner or of Schumpeter), and so on” (1986, p. 252).

A reference must also be made to Choi (1993; 1999), who points out the unconventional character of innovative entrepreneurial behavior, but is somewhat ambiguous regarding whether “those who do not behave conventionally . . . will fare rather poorly” (1999, p. 66; also p. 68) or may “achieve outstanding success by exploiting [unnoticed opportunities] through innovative—and therefore unconventional—practices” (*ibid.*, p. 72; also p. 69). Choi does not explicitly discuss whether conventional or unconventional is rational or otherwise, although he stresses the limits of the neoclassical treatment of rationality and searches for an alternative notion (which he seems to find in Simon’s bounded rationality).

### **Concluding remarks**

Several arguments for the rationality of conventional behavior under non-neoclassical uncertainty have been presented in the heterodox economic literature and considered here. Whereas these arguments may be compelling in some circumstances, they have limited applicability to situations of fundamental uncertainty. In these situations, the limitations of knowledge as a guide to conduct are particularly significant, and, consequently, so is the role of factors such as creativity and an optimistic disposition to face uncertainty. These factors are crucial for determining whether behavior will be conventional or not, in light of people’s knowledge (including their knowledge of conventions) and of the end(s) that they wish to pursue.

Whereas the existing approach to conventions and reasonableness has focused on conventional behavior as the reasonable option, an alternative approach is less restrictive. It does not neglect innovative behavior, nor does it suggest that this kind of conduct is unreasonable. On the contrary, it argues that a decision-maker can use the available knowledge, including knowledge of conventions, to either follow the convention or to intentionally *flout* the convention, going against the stream. This use of knowledge, in combination with creativity and the optimistic disposition, may allow unconventional behavior under non-neoclassical uncertainty to be at least partly rational, depending on how rationality and its relation to knowledge are conceived of. A very important example of such behavior is the introduction of innovations by the Schumpeterian entrepreneur or firm.

This paper has not considered, however, all the necessary building blocks of an alternative approach to convention and rationality under non-neoclassical uncertainty. In particular, further research is needed to deal with the conceptual discussion of rationality or reasonableness.

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