Texto para discussão

80

On some arguments for the rationality of conventional behaviour under uncertainty: concepts, applicability and criticism

David Dequech

jul. 1999

Instituto de Economia UNICAMP

On some arguments for the rationality of conventional behaviour under uncertainty: concepts, applicability and criticisms

David Dequech

Professor-pesquisador visitante no Instituto de Economia da UNICAMP, Campinas, SP, Brasil (Bolsa de pós-doutorado da FAPESP)

Texto para Discussão. IE/UNICAMP, Campinas, n. 80, jul. 1999.

Comissão de Publicações/Instituto de Economia/UNICAMP

Luiz Gonzaga de Mello Belluzzo Geraldo Di Giovanni Paulo Eduardo de Andrade Baltar Ricardo de Medeiros Carneiro (Coordenador)

Equipe de Produção

Normalização: Célia Maria Passarelli Quitério

Editoração: Regina Voloch Santin Capa: João Baptista da Costa Aguiar

Impressão e Acabamento: Gráfica Central da UNICAMP

Ficha catalográfica elaborada pelo Centro de Documentação – CEDOC do Instituto de Economia da UNICAMP

Dequech, David

On some arguments for the rationality of conventional behaviour under uncertainty: concepts, applicability and criticisms/DavidDequech. – Campinas, SP: UNICAMP. IE, 1999.

24p. (Texto para Discussão. IE/UNICAMP, n. 80)

ISSN 0103-9466

1. Racionalidade. 2. Convenções. 3. Incerteza (Economia). I. Título. II. Série.



Universidade Estadual de Campinas Instituto de Economia (www.eco.unicamp.br) ⊠ Caixa Postal 6135 – CEP 13083-970 – Campinas, SP – Brasil (019) 788.5708 □ (019) 289.1512 □ public@eco.unicamp.br

On some arguments for the rationality of conventional behaviour under uncertainty: concepts, applicability and criticisms¹

David Dequech

Abstract

This paper tries to organize, develop and criticize the treatment of the relation between conventions and rationality under uncertainty. It begins by identifying different concepts of conventions. Next, it critically examines the approach centred on the rationality of following a convention. Several arguments for this rationality are highlighted. These arguments are based on convention as something workable, as induction, as a self-fulfilling prophecy, as defensive behaviour or as something that avoids criticism. The paper emphasizes the impossibility of completely rationalizing behaviour under uncertainty and the difficulty of knowing whether a convention will continue being followed. The reviewed literature is criticized for neglecting the possible compatibility between unconventional behaviour and rationality, as well as the deeper cognitive function of conventions.

Key words: Rationality; Conventions; Uncertainty (Economy).

Resumo

Esse texto procurar organizar, desenvolver e criticar o tratamento da relação entre convenções e racionalidade sob incerteza. Ele começa identificando diferentes conceitos de convenção. Em seguida, examina criticamente a abordagem centrada na racionalidade de seguir uma convenção. Diversos argumentos para essa racionalidade são destacados. Esses argumentos são baseados na convenção como algo prático, como indução, como uma profecia auto-realizável, como um comportamento defensivo ou como algo que evita críticas. O texto enfatiza a impossibilidade de racionalizar completamente o comportamento sob incerteza e a dificuldade de saber se uma convenção continuará sendo seguida. A literatura revista é criticada por negligenciar tanto a possível compatibilidade entre comportamento não-convencional e racionalidade quanto a função cognitiva mais profunda das convenções.

Palavras-chave: Racionalidade; Convenções; Incerteza (Economia).

Introduction

There exists an increasing body of literature that tries to show that emphasizing uncertainty in a strong sense (such as Keynes's) does not lead to

⁽¹⁾ This paper is a somewhat revised version of a chapter in a book in honour of Geoff Harcourt (Dequech, 1999c). I am grateful to Paul Davidson, Alessandro Vercelli, Claudio Sardoni and the participants of the Post Keynesian Economics Workshop, Cambridge, February 1996, for comments on earlier drafts of this chapter. Above all, I would like to express my gratitude to Geoff Harcourt and my admiration for his very rare combination of scholarship, kindness and joie de vivre. Financial support from CNPq/Brazil is thankfully acknowledged.

theoretical nihilism.² A major part of this literature deals with the possibility of rational behaviour under uncertainty, often resorting to Keynes's references to conventions.

In what follows, I try to organize, develop and criticize the treatment of the relation between conventions and rationality under uncertainty, which has been rather obscure and confusing, particularly in what concerns the concept of convention and the arguments in favour of the compatibility between conventions and rationality. This is the first step in what I consider to be a broader and more adequate approach, which I pursue elsewhere (Dequech 1998, chap. VIII).

1 The concept of convention

Several definitions of conventions coexist in the literature that refers to conventional behaviour under uncertainty.

Since some of these definitions are interpretations of what Keynes meant by a convention, it is worth noting that Keynes did not explicitly define convention. He (1936: 152-3; 1973c, v. XIV: 114, 124) can be summarized as referring, rather loosely, to (a) the assumption that the current situation will continue to exist in the future, unless specific indicators in the contrary direction appear, and (b) the resort to the average or majority opinion. The same applies to other authors who follow Keynes – e.g. Lawson (1985: 916), Carabelli (1988, esp. p. 225, 227, 237 and 301), O'Donnell (1989: 254, 261) and Meeks (1991: 128-32). In my opinion, this is too vague.

I have selected a few of the more explicit definitions.

⁽²⁾ The charge of nihilism was made by Alan Coddington (e.g. 1982), to whom part of that literature responds directly.

⁽³⁾ This is different both from the Rational Expectations Hypothesis and the Adaptive Expectations Hypothesis (Dequech, 1999d).

⁽⁴⁾ Excessive broadness rather than vagueness is the potential theoretical problem with Davis's (1994a: 166; also 1994b) conceptualization of Keynes's convention. Convention would be a structure of different individual expectations 'that bears a complex relationship to average opinion as its central reference'. This allows procedures that differ from a certain standard to be considered a convention. In this case, it would be difficult to define what unconventional behaviour is. Consequently, convention itself becomes too broadly defined. In contrast, the theoretical interest of the definition extracted from Dutt and Amadeo's (1990: 105-6) reading of Keynes is affected by their primary association of convention with the projection of the existing situation. Relying on other people would not be a convention. This seems to be too restrictive.

- (1) Some writers explicitly argue for a broad concept of convention. Darity & Horn (1993: 28, 31), interpreting Keynes, mean by a convention a rule of thumb and state that 'there are many types of rule of thumb'. The projection of the existing situation and the reliance on the opinion of others would be examples of rules of thumb.⁵
- (2) Also inspired by Keynes, another conceptualization, hinted at by Possas (1990: 11-12) and developed here more explicitly, identifies the convention primarily as the conformity with the average opinion. The projection of the present and the recent past into the future is considered as one even if the most important of the possible conventional (that is, average) opinions. The projection of the existing situation would be, then, one of the specific expectational patterns that people can adopt.
- (3) On my own definition, convention is, first of all, a *collective* rule of thumb, or, more precisely, a socially shared and/or prescribed standard of behaviour (and thought). This is different from definition #2 in that the average opinion can be the result of many different individual types of behaviour, whereas the idea of a collective rule of thumb or standard of behaviour suggests that many people follow a similar rule or standard. The two definitions are almost equivalent when the dispersion around the average opinion is very low. Then, the specific pattern of expectations that represents the average opinion would be the one underlying the specific rule of thumb that is followed. As a socially shared and regular standard of behaviour, a convention on this definition is similar to what other people and I call an institution or a type of institution. On my definition, a convention has two other characteristics: (a) it is followed at least in part because other people are following it; (b) it is to some degree arbitrary.
- (4) For Lewis (1969: 58), a convention is also a collective standard of behaviour, but his definition is more restrictive than mine, for it requires everyone to conform to the convention when there is an expectation that others will do the same. Based on Lewis, Bromley (1989: 41-2) and Runde (1994: 248) adopt a similar definition (Bromley 1989: 79n, notes that Lewis's definition is not always so strict) see also Schotter (1981) and Sugden (1986).

⁽⁵⁾ Although not so explicitly, Lavoic (1992: 55-8), combining Keynes and Simon, takes a very similar position. For Driver & Moreton (1992: 73-4), likewise, the notion of convention encompasses 'a broader range of possibilities than merely maintaining previous behaviour', but they fail to be more specific than this.

The rule-of-thumb definition proposed by Darity & Horn (1993) applies, as in Simon, to an individual procedure which is not necessarily associated with a collective pattern of action, although the resort to the opinion of others is seen as one among the several possible individual rules of thumb. The definitions of convention as compliance with the average opinion and as a collective rule of thumb are closer to the common way of seeing a convention as something shared with others (see also Lawson, 1991a: 221; McKenna & Zannoni 1993: 402; Dow 1995: 119).

The conceptual differences shown in the previous paragraph are very relevant for an analysis of the relation between convention and rationality, to which I now turn.

2 A critical examination of some arguments for the rationality of conventional behaviour

Before anything else, I should emphasize the obvious fact that, if a convention is seen as a response to uncertainty, the study of a possible compatibility between convention and rationality cannot adopt a concept of rationality (such as in mainstream neoclassical economics) that is indissolubly linked to the assumption that Keynes's uncertainty, if it exists, is irrelevant. Otherwise, the study is over as soon as it starts and the possible compatibility is denied.

Different interpretations are presented in the next paragraphs which share a belief in the compatibility between convention and rationality. In this sense, they are contrary to the position taken by Shackle (1967: 228), who treats the resort to conventions as a substitute for reason, the latter being incapable of operating for lack of data.

Several authors working with a strong concept of uncertainty broaden the notion of rationality by associating it with the existence of 'good reasons' or with people 'doing the best they can under the circumstances' – see Lawson (1985: 918; 1993: 194), Harcourt (1987: 237); Hamouda & Harcourt (1988: 214); O'Donnell (1990: 258, 264), Runde (1991: 134), Lavoie (1992: 51); Langlois (1986: 230). Without further specification, this is too generic. In particular, this could be compatible with an extremely subjectivist view. To avoid extreme subjectivism, rationality is defined here as something that requires knowledge, in a somewhat

objective or intersubjective sense. Uncertainty does not imply complete ignorance and therefore allows for a broader notion of knowledge and rationality than the neoclassical. Irrationality is that which is contrary to rationality. I overcome the dichotomy between rationality and irrationality by introducing a third possibility: arationality is not based on nor contrary to knowledge (Dequech, 1999b). Hence, under uncertainty there is necessarily some space left for arationality, when knowledge is not enough to determine what is a rational and, consequently, what is an irrational course of action. In addition to being based on knowledge, rational behaviour is also defined here as the most adequate, in the light of the available knowledge, to the achievement of some end, even if it turns out to be unsuccessful ex post. This criterion is particularly useful when analysing the behaviour of capitalists, decision-makers who, at least for some analytical purposes, can be assumed to be self-interested and to have pecuniary gain as their ultimate objective.

Another preliminary remark is necessary. Following Lewis and others, game theory has discussed convention (or institution, as it is sometimes called), defining it as a solution to a coordination game with multiple equilibria (for uncomplicated, recent discussions see Young, 1996 and Lecq, 1996). I will not deal with the relation between convention and rationality in game theory, for the latter traditionally abstracts from uncertainty in the strong sense adopted here.⁶

There are two basic ways of approaching the relation between convention and rationality under uncertainty so that compatibility between them is possible. In the first and prevalent one, the relation between convention and rationality has been constructed in a restrictive manner, which centres on the rationality of *following* a convention. See Kregel (1987: 525), Harcourt (1987: 241), Feltz & Hoogduin (1988: 117), Rotheim (1993) and Rogers (1997: 330). More specific references to several other authors will be made shortly. The second approach, which I suggest in

⁽⁶⁾ See Shackle (1972: 422-6) and, regarding the Bayesian foundations of game theory, Binmore (1987: 210-11). Other, related criticisms of this literature on conventions/institutions in game theory are made by Mirowski (1986). I should note, however, that game theory has begun to incorporate recent developments in decision theory which go beyond the standard, weak notion of uncertainty (or risk) prevalent in mainstream economics (e.g.: Dow & Werlang 1994; Lo 1996; see also Epstein & Wang 1996). It is still to be better assessed whether these developments really convey the strong notion of uncertainty involved in the most relevant economic decisions, as in Keynes's sense. Even less explored so far is the impact of these developments for the discussion of rationality and conventions in a game-theoretical application. The discussion of rationality in game theory is already very complex, to say the least, without introducing issues related to strong uncertainty.

Dequech (1998), is less restrictive. Here I will limit myself to a discussion of the first approach.⁷

Different arguments may be given to try to show that it is rational to follow a convention, depending, among other things, on how the latter is defined. In what follows I present some of these arguments, try to improve and/or generalize them, but also ultimately criticize them. It should be noted from the start that my own position is that following a convention is not necessarily the best option to take. I prefer the second, less restrictive, approach to the first. In this sense, I will be surveying and even trying to improve some arguments which I eventually consider insufficient, at least in the light of my own definition of rationality. The approach that asserts the rationality of following a convention under uncertainty is not completely successful. A particularly important type of action which this first approach does not adequately deal with is innovative behaviour, as in the case of the Schumpeterian entrepreneur. Even if one improves the definition of convention and the arguments for following a conventional behaviour, as I will try to do, one cannot argue that it is best for a decision-maker to follow a convention. I should also note that my critical assessment of the first approach is completed only in the sequel to this paper, with my proposal of an alternative. This alternative goes beyond the literature discussed here in two aspects. First, it expands the discussion of the rationality of conventional behaviour by explicitly connecting conventions, tacit knowledge and rationality. Second, it incorporates the possibility of unconventional behaviour as something compatible with rationality

2.1 Workability

The rationalization of conventional behaviour in terms of 'workability' is most clear in Darity & Horn (1993: 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' (p.32). 'Workable' seems to mean here not too complicated.

⁽⁷⁾ Before doing this, I should note that there are those, such as Fitzgibbons (1988) and Winslow (1989: 1180), who, specifically dealing with Keynes, identify an *incompatibility* between convention and rationality. At least in part, this involves Keynes's position on ethics (and G. E. Moore's influence on it), which lies beyond the confines of this paper. On this, see the rebuttal of Fitzgibbons's claim by Lawson (1991a: 204-8; 1993). I expect to provide, by the end of section 2, several arguments for qualifying Fitzgibbons and Winslow's interpretation without having to discuss ethics. I will avoid discussing the rationality or otherwise of pursuing money or pursuing the good, issues that appear in Winslow (1989, 1992).

The argument of workability applies both to financial and product markets.⁸ Rules of thumb – be they individual or collective – save the time involved in analysing a large amount of information.⁹

Now one can ask which specific rule of thumb the individual will choose and why. The problem is that being twice as bold as the average opinion is also workable, and so is doing nothing and preferring liquidity. Some elements for this discussion appear in the next sections. Moreover, uncertainty is not merely complexity. Thus, the workability argument is not sufficient to rationalize conventional behaviour under uncertainty.

2.2 Convention as induction

Another argument intended to show the rationality of conventional behaviour appears in the writings of authors that propose to interpret *The general theory* in the light of Keynes's major philosophical work, his *Treatise on probability* (TP hereafter). According to that interpretation, it is rational to use induction as a guide for action under uncertainty. O'Donnell (1989) and Gay Meeks (1991) are among the main defenders of such view. For example, O'Donnell (1989: 250) argues that, in Keynes's theory of expectations, 'the primary notion is that expectations are generally based on *induction*' (original italics). O'Donnell clearly implies that induction is what Keynes has in mind when he speaks of projecting the existing situation into the future (see also Meeks, 1991).¹⁰

This interpretation is centred on the projection of the existing situation. To the extent that in this argument the projection of the existing situation can be

⁽⁸⁾ Even if he did not (at least not explicitly) define convention as a rule of thumb, Keynes (1936: 51) can be interpreted as using 'workability' as part of his justification for the convention of projecting the present when forming short-term expectations: 'It would be too complicated to work out the expectationsde novo whenever a productive process was being started'.

⁽⁹⁾ This is clearly close to Herbert Simon's (1955, 1959) work on bounded rationality. The rationalization of rule-following in terms of its workability for an individual with a limited capability to deal with a vast and complex amount of information also appear in other traditions of economic thought. Rutherford (1994: 59-60) and Perlman (1986: 272) point out similar ideas by old institutionalists such as Commons, Mitchell and J. M. Clark. Hayek should also be mentioned here, at least in Vanberg's (1993: 181-2) interpretation (but see Vromen, 1994: 216). A more recent author to emphasize the rationality of rule-following people with what he calls a competence-difficulty gap is Heiner (1983).

⁽¹⁰⁾ On Keynes and induction, see also Brown-Collier & Bausor (1988), Hamouda & Smithin (1988b) and Carabelli (1988).

associated with a convention, 11 then conventional behaviour would be seen as rational behaviour.

I accept that there is some cognitive basis for the projection of the recent past and the present into the future (see also Dow & Dow, 1985: 52; Lawson, 1991a: 200; 1995: 94-95 and Runde, 1991: 136-37). Keynes (1936: 249; 1973b, v. XIII: 137) pointed out that the economic system 'is not violently unstable' and that one 'must not confuse instability with uncertainty'. Following these warnings, Davidson (1978: 385) argues that 'the economic system is *potentially* very unstable. Recognizing the mercurial possibility of the economic system, man has, over time, devised certain institutions and rules of the game, which, as long as they are operational, avoid such catastrophes by providing a foundation for a *conventionality* of belief in the stability of the system and hence in the quasistability of the state of expectations' (emphasis added).

Among these institutions, Davidson (1978: 388-9) highlights, first of all, contracts and especially the money-wage contract, crucial for the 'conventionality of belief' in price stability. He (1994: 49-50) also emphasizes the existence of a 'market maker' in national and international financial markets, which provides a considerable degree of orderliness in these markets. Kregel (1980: 46; 1981: 69-70) refers not only to wage and debt contracts but also to supply and trading agreements as 'uncertainty-reducing institutions'.

Furthermore, along with these institutions, conventions themselves play a decisive stabilizing role.¹⁴ As a particular case, the convention of projecting the present and the recent past into the future contributes to this, as Keynes himself argued,¹⁵ and therefore reinforces itself. The point is more general: institutions, conventions, social practices, etc., through their influence on people's behaviour,

⁽¹¹⁾ It can indeed, because these authors do not explicitly define convention. Following Keynes's 1937 Galton Lecture (1973c, v. XIV: 124), O'Donnell (1989: 254) refers to the 'inductive process described above' as a convention. On another occasion (p. 261), he follows Keynes's 1937 QJE article association between conventional judgement and imitation of the majority. The same applies to Meeks (1991). Another thing to note regarding this line of argument is that a convention does not need to have a social character. It can be merely individual.

⁽¹²⁾ In the same vein: 'the state of long-term expectation is often steady' (Keynes, 1936: 162).

⁽¹³⁾ Towhshend (1937) was an early interpreter of Keynes to emphasize this. See also Shackle (1967: 228, 247), Carvalho (1992: 28, 100-102) and Rotheim (1993).

⁽¹⁴⁾ See, for example, Vickers (1979/80: 244-5; 1994: 157-9), Harcourt (1981: 261), Harcourt & O'Shaughnessy (1985: 8-9), Earl & Kay (1985: 43), Hamouda & Smithin (1988a: 163), Carabelli (1988: 220), Littleboy (1991: 30), Lavoic (1992: 11), Darity & Horn (1993: 30), Rotheim (1993: 199) and Crotty (1994).

⁽¹⁵⁾ At least in the stock market context, 'the above conventional method of calculation will be compatible with a considerable degree of continuity and stability in our affairs' (Keynes, 1936: 152). I believe the argument is valid for many other markets.

bring order to economic life. This point, forcefully made by institutionalists as, for example, Neale (1987), Hodgson (1988) and Fusfeld (1989), is acknowledged by Carvalho (1983-84) and Lawson (1985).

These factors make the projection of the present and the recent past a pattern of expectations particularly capable of being adopted by many different people and thus becoming a convention. They justify Keynes's emphasis on this projection. Especially for short-term expectations, this convention can be said to be *partly* based on some type of knowledge (even if one does not call it inductive or probable knowledge).

However, I draw a distinction between the rationality of belief and the rationality of behaviour. Rational belief is a necessary but not a sufficient condition for rational deliberate behaviour. The rationality of deliberate behaviour depends on the reliability of rational belief as a guide to conduct. This distinction is useful when discussing the TP. In the TP, probability is a rational degree of belief. Probability as applied to conduct has to be supplemented by weight (TP, chapter 26). Even if some kind of probable knowledge (in the TP sense) were possible under uncertainty, there would still exist doubt as to the reliability of such knowledge as a guide to action. Similarly, in Keynes's later writings, the notion of confidence reflects the doubts as to the reliability of expectations. The corresponding distinction between expectations and behaviour should also be made. As suggested in Dequech (1998, chap. V), the rationality of the state of expectation - as well as the rationality of decision-making, by extension - depends not only on the rationality of expectations but also on the rationality of confidence (as discussed in detail in Dequech, 1999a, expectations and confidence form the state of expectation). Even if it were possible, under uncertainty, to form expectations based on some kind of probable knowledge (for example, in the TP sense), there would still exist doubt as to the reliability of such knowledge as a guide to action.

O'Donnell himself acknowledges this reliability problem. O'Donnell (1989: 252) argues that to the 'core notion' of induction 'Keynes attached two further ideas'. The first is that only knowledge of the present and the recent past, as opposed to the distant past, 'will commonly be used in the inductive projection'. The second 'is that the reliability of induction as a guide to the economic future decays rapidly when expectations are pushed beyond the immediate horizon'.

While there exists a difference in degree of uncertainty between short- and long-term expectations, the former also involve uncertainty, contrary to what seems

to be O'Donnell's view. In any case, it is more difficult for this projection to become the specific expectational pattern adopted by the average opinion in the case of long-term expectations, which guide the decision to purchase capital goods. In this specific sense, O'Donnell (1989: 253) correctly highlights the difference between short- and long-term expectations. For example, contracts with the same, very long duration as capital goods are not so common. In addition, the more distant is the future, more time is allowed for technical innovations or important cultural and political changes to occur.

The projection of the existing situation might even be seen by the average opinion as the best long-term expectation to form in the absence of a calculable basis. People may have some confidence in this convention, and particularly they will have more confidence in it in a country with more stable institutions and social practices, *ceteris paribus*. However, the confidence in this convention tends to be considerably less than in the case of short-term expectation. This makes investment expenditures especially liable to sudden changes.

In conclusion, conventional behaviour cannot, under uncertainty, be completely based on inductive or probable knowledge (or any knowledge, for that matter). Consequently, conventional behaviour cannot be considered completely rational under uncertainty, if rationality comes in degrees and its degree is given by the extent of its basis in knowledge. As argued in section 1.1 above, behaviour may only be partly rational under uncertainty, be it conventional or not.

Moreover, if the projection of the current situation into the future were completely based on knowledge, there would be no degree of arbitrariness in its becoming a pattern of behaviour followed by many people. Then, if a convention is to some degree arbitrary in this sense, by definition, how could that projection be called a convention?

Furthermore, some people may intentionally break with the current situation through their own innovative actions. For example, the Schumpeterian entrepreneur does not project all the relevant aspects of the existing situation into the future, but instead creates a new future.

2.3 Convention as a self-fulfilling prophecy

Hinting at a definition of convention as conformity with the average opinion, Possas (1990:11-12) argues that it may be rational to follow the

convention because the average opinion may indicate 'a convergence, and, as such, a probable market trend' of the variables considered. The use of the average opinion as such an indicator has 'at least two preconditions. ... The first consists in the possibility of identifying, and progressively turning into conventional use, a particular pattern of expectations'; the second is 'a low dispersion of opinions around the average'. The first precondition is necessary for the formation of the convention, which obviously is, in this perspective, a specific average opinion; the second is required so that the convention is really representative of a likely market trend.

In this argument, as I understand it, the average opinion represents 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 (1936) could perhaps be seen as applying this to the expectations about the interest rate (see also Freedman 1995: 91). At any rate, Possas (1990: 23n) believes that the average opinion can represent a likely trend of product markets, under some stable conditions. This is contrary to O'Donnell's (1989: 261) belief that the average opinion would be of most significance for those operating in financial markets (also, although less emphatically, Meeks, 1991: 132-3, 136).

Concepts of convention that refer to an eminently individual behaviour, with no necessary relation to the opinion of others, cannot give rise to this kind of rationalization of conventional behaviour.

This argument is critically examined in section 2.5.

2.4 Conventional behaviour as defensive behaviour

One may try different ways to defend the rationality of following a convention by saying that this is defensive behaviour in conditions of uncertainty.

One of them is provided by Lawson (1991a). He centres his analysis of conventional behaviour on the projection of the present and recent past, which is

⁽¹⁶⁾ Referring to the rate of interest as a conventional phenomenon, Keynes (1936:203) 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' (original emphasis). The use of the notion of convention in this case is complicated, however, for Keynes (1936: 172) also mentions the need for divergent opinions in such markets.

for him one example of a convention. He confines this argument of defensive behaviour (and interprets Keynes as doing the same) to the 'investment' decision and, even more restrictively, to the decision of 'investing' in financial markets.17 Holding to the projective convention allows investment to be made safe (p. 194 and 207). Lawson supports this argument with Keynes's (1936: 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'. Lawson (1991a: 208, original emphasis) states that 'it is essential for the argument that the convention in question be viewed not merely as an individual rule of thumb ... but as a procedure of action that a community of investors simultaneously draws upon. ... [A]n individual investor must be able to rely upon it being (through the actions of others) maintained. Its maintenance ... can facilitate a degree of continuity and stability in market evaluations and thus a degree of security' for the individual. Thus, the mere projection of the current situation by a single individual is not necessarily seen as rational. Its rationality depends on other people also following the same convention. Consequently, there is a connection with the opinion of the majority, even though the concept of convention is not explicit.

Lawson's (1991a) argument applies only 'if there exist organised investment markets' (Keynes, 1936: 152) such as the Stock Exchange. In this context, it seems that the need for other people to keep holding to the convention of projecting the present and the recent past is important in the sense that this is what guarantees for an individual the 'opportunity to revise his judgement and change his investment, before there has been time for much to happen' (Keynes, 1936: 152; quoted by Lawson, 1991a: 194). Thus, an important part of this argument is the possibility that the individual disagrees with the majority and decides to abandon the convention, which he or she can only do because there is an organized market. This is why Keynes refers to 'investment' being made liquid for the individual.

Those willing to rationalize conventional behaviour as defensive behaviour could use the concept of convention as a shared standard of behaviour or, what can be similar in some circumstances, as conformity with the average opinion. The

⁽¹⁷⁾ Keynes, in his analysis of the stock exchange (1936: 152-3), refers to 'investment' and 'investors' also in a less strict sense than the one that applies (as in Keynes 1936: 62; 1937: 118) only to the direct purchase of capital goods.

⁽¹⁸⁾ An organized market is one where there exists what Davidson (1994: 49-50) calls a 'market maker'. I refer below to the relation between the existence of this type of institution and the convention of projecting the current situation.

argument with this concept would be that conventional behaviour is a rational defence against uncertainty because it represents for the individual a potentially successful attempt to preserve his or her position relative to other people in the relevant market, since the individual will be behaving in a manner similar to these other people, on average. This would be a more specific way of arguing that 'the safest course of action may simply be to follow the crowd' (Hamouda & Smithin, 1988b: 281) or that 'there are less chances of getting burned when one is following the crowd' (Lavoie, 1992: 57). Again, for the average opinion to be representative, the dispersion around it has to be low.

Possas (1987: 133-4) provides this type of argument in his analysis of conventional behaviour in the investment decision (in the sense of the decision to buy capital goods). For him (as for Shackle, 1967: 133), Keynes gave too much attention to the connection between (physical) investment and speculation in financial markets, thus overemphasizing the forecasts expressed in these markets and neglecting the conditions of competition in the product market. This interpretation is subject to qualifications, for example regarding Possas's belief that Keynes restricted the use of his idea of convention to financial markets. Nevertheless, Possas (1987: 133n) is right in pointing out the importance, for an individual's decision to invest in a product market, of the opinion of the competitors in that market.

This argument is relatively weakened, however, if presented without an explicit concept of convention, as by Possas (1987), who follows Keynes's 1937 QJE article – see also Lawson (1991b: 245-6). In my opinion, once the definition of convention as a shared standard of behaviour or as compliance with the average opinion is adopted,²⁰ the argument of the defensive character of conventional behaviour gains precision and a more visible generality, being applicable not only to the investment decision in the product markets but also to the production decision in these markets²¹ and even to financial markets²² and possibly the labour

⁽¹⁹⁾ Therefore, this behaviour is conventional in two complementary senses: first, it is, by definition, something socially shared; second, it is conservative, not bold.

⁽²⁰⁾ This definition, as argued above, makes explicit and develops the connections, intimated by Possas himself in another paper (1990), between convention, conformity with the average opinion and projection of the current situation. In his 1990 paper Possas does not refer to this defensive preservation of the relative position, restricting himself to the argument of the self-fulfilling prophecy discussed in the preceding section.

⁽²¹⁾ This runs counter to the position of Littleboy (1991: 278).

⁽²²⁾ For example, this argument would support Darity & Horn's (1993: 29-30) analysis of herd behaviour, in which they extend Keynes's discussion to another segment of the financial markets, namely bank lending. As seen in the previous section, for them herding is one of the possible rules of thumb that people may follow.

market.²³ Again, this is contrary to O'Donnell's (1989) and Meeks's (1991) belief that the average opinion would be of most significance for decisions in financial markets.

Being based on the attempt to maintain the relative position of the individual in a market, and different from Lawson's (1991a) justification of the defensive character of conventional behaviour, which centred on the convention of projecting the present, this argument does not depend on the specific pattern of conventional expectations, that is, on what the average opinion expects the future to be. When this specific pattern is the projection of the current situation, regardless of whether it is more difficult to rationalize this projection by a single individual isolatedly, it would be argued in this case that it is rational to project the existing situation because the other decision-makers, on average, are doing the same.²⁴ More generally, it would be rational to do whatever the other decision-makers, on average, are doing.

Neither does conventional behaviour as defensive behaviour depend on the convention tending to be a self-fulfilling prophecy. Even if the collective opinion turns out to be contradicted *ex post*, following it would help the preservation of the relative position by the individual.²⁵

Therefore, at least as far as product markets are concerned, the defensive character of conventional behaviour would provide a more general rationalization for this behaviour than the argument of the self-fulfilling prophecy, discussed above. The latter can be seen as complementary to the former, reinforcing it in some particular cases which depend on the market in question.²⁶

⁽²³⁾ This could provide a rationale for the concern of workers with their relative wages, as argued by Keynes (1936, chap. 2), in a situation where they cannot bargain in terms of real wages and there is uncertainty as to what the prices of wage-goods and thus real wages will be. Workers trying to preserve their relative wages could then be seen as following the crowd.

⁽²⁴⁾ This would be more clearly applicable to a hypothetical situation in which: (a) the projection of the current situation of a market is the specific pattern of expectations adopted, on average, by people in that market; (b) an individual decision-maker, knowing this, follows the average opinion by making the projection. Reality, however, may be quite different, as I discuss below.

⁽²⁵⁾ It should be noted that a different type of argument applies to the case in which people want to protect their reputations. I come back to this below.

⁽²⁶⁾ It should be noted that both arguments, and perhaps especially the defensive one, involve an evaluation (not totally based on calculus) of the consequences of conventional behaviour. They are not necessarily in conflict with Keynes's 1938 letter to Townshend (Keynes, 1979, v. XXIX: 294) where he mentions motives 'which are not 'rational" in the sense of being concerned with the evaluation of consequences'. The compatibility lies in that Keynes may be interpreted as referring to a purely calculus-based evaluation, since none of the alternatives 'is demonstrably more 'rational" than the others, in the sense that we can arrange in order of merit the sum aggregate of the benefits obtainable from the complete consequences of each'.

The argument in favour of the rationality of defensively following the average opinion or a shared standard of behaviour would be more general also in the sense of being applicable, in what concerns products markets, both to the investment and the production decisions in these markets. Therefore, this argument, associated with the distinction between the convention and the specific pattern of conventional expectations, would imply the necessity of qualifying O'Donnell's (1989: 253) position, according to which 'it is in relation to the formation of LTE [long-term expectations] that rational behaviour becomes a more complicated, fluid and precarious affair'. His observation does not apply to the shared standard of behaviour or to the conformity with the average opinion, although it may be valid for the specific pattern of conventional expectations, such as the projection of the current situation, which I will discuss shortly.

Behind the difference between the defensive argument and O'Donnell's in this regard lies the fact that he primarily links rationality to induction and associates the projection of the present and the recent past with induction. As shown in section 2.2, for O'Donnell (1989: 250), induction is the 'core notion' in Keynes's theory of expectations. O'Donnell (1989: 252) argues that to this 'core notion' of induction 'Keynes attached two further ideas'. The first is that only knowledge of the present and the recent past, as opposed to the distant past, 'will commonly be used in the inductive projection'. The second 'is that the reliability of induction as a guide to the economic future decays rapidly when expectations are pushed beyond the immediate horizon'. This is why for O'Donnell the rationality of behaviour based on long-term expectations is a more complicated affair. Meeks (1991: 153-4) argues similarly.

With the definition of convention based on conformity to the average opinion or on a shared standard of behaviour, the other arguments do not depend on the projection of the existing situation necessarily being the specific pattern of expectations chosen and apply equally to short- and long-term expectations.

As in the case of the self-fulfilling-prophecy argument, I present my objection to the defensive argument in section 2.5.

2.5 The problems with following the average opinion or a social rule

My first criticism applies to both arguments presented in sections 2.3 and 2.4, that is, to the attempt to rationalize conventional behaviour as the pursuit of a

self-fulfilling prophecy and/or as defensive behaviour. The trouble emerges from the difficulty an individual may find in ascertaining the average opinion in the market he/she operates in. There may exist some information in this regard, but other information is missing. Uncertainty involves not knowing what others will do.²⁷ This problem has to do with the contribution of the interdependence between decision-makers to the uncertainty faced by them, and also with the possibility of creative behaviour on the part of other decision-makers. Even if decision-makers have been following a convention, some of them may lose their confidence in it and abandon it. Others may intentionally adopt an unconventional behaviour. People may have knowledge of conventions, as Lawson (1985: 916-17) and Darity & Horn (1993: 30) claim, but they also must have doubts about the continuity of conventions and the reliability of such knowledge as a guide to action. My point is thus basically the same I made when commenting on convention as induction (section 2.2).

Incidentally, uncertainty implies also that the resort to the opinion of others cannot, in general terms, be justified on the basis, suggested by Keynes (1937: 114), that 'the rest of the world' is 'perhaps better informed' than a particular individual. It is true that, if uncertainty does not imply complete ignorance, some people may be better informed than others. However, if decision-makers are aware of uncertainty, they know that other people also lack some knowledge and, therefore, are not totally reliable. Moreover, a decision-maker has also to consider that other people may be *less* informed than he/she is.

The second criticism has also to do with uncertainty and is directed more specifically to the argument that conventional behaviour is rational because it is defensive. The definition of rationality adopted here relates rationality to the adequacy of behaviour to some end. It is possible to characterize defence as an end. Lawson (1991a: 215), for example, argues that 'in defending the adoption of conventions by investors, Keynes effectively shifts the objective to investment safety'. 'To fare no worse, generally, than others' (Lawson, 1991b: 245) would be a shorter-term objective. The point made in the previous paragraph raises problems even if the rationality of behaviour is assessed in relation to this objective. If there are doubts as to what others will do, there are doubts as to how one will fare in

⁽²⁷⁾ Contrast this with Darity & Horn (1993). According to Shackle (1970: 102, apud Kregel, 1990: 90), 'a great part of business efforts is directed to defeating the efforts of one's rivals to know what one is doing and is going to do'. Keynes himself wrote (1971, v. V: 292) that entrepreneurs 'take pains to conceal [their decisions] from one another'.

comparison with others. Uncertainty implies such doubts, even if to some degree the maintenance of the convention can be relied upon.

However, there is still another problem. A non-ultimate end can be seen as a means to an ultimate end. Lawson (1991a: 214) himself refers to a general motive "which provides a criterion against which other 'ends' can themselves be assessed". What happens then if this general end is the pursuit of pecuniary gain, as suggested above?²⁸ Even if one knew with certainty what the others are going to do, one would still have doubts as to whether following the others would be adequate to the pursuit of this ultimate end.²⁹ There are competing alternatives. One of them is to adopt the position that is really defensive: to prefer liquidity. Another option would be to intentionally disobey the convention, as the Schumpeterian entrepreneur does.

2.6 Convention and the avoidance of criticism

There is another type of argument that might be used to rationalize conventional behaviour. More specifically, this argument applies to the following of social norms, which, as I understand them, are conventions with normative content. Norm-guided behaviour can sometimes be justified by the idea that people that follow a social norm are rational if they are pursuing a particular objective: to avoid the criticism of others, or even ostracism. If this is the ultimate objective, conventional, norm-guided behaviour will achieve it almost by definition, although the problem of not knowing what others will do and thus not knowing how to compare ourselves to others may also be relevant here.

An example of this in economic decisions is perhaps the one about which Keynes (1936: 157-8) writes: 'Worldly wisdom teaches us that it is better for reputation to fail conventionally than to succeed unconventionally' (see also Lavoie, 1992: 57). Lawson (1991a: 217-18) applies this reasoning to the situation of managers of 'investment' funds in organized 'investment' markets. Davidson (1994: 237-8) uses it when discussing the case of international bankers and comptrollers of multinational corporations operating in exchange rate markets. The argument can be extended to managers of large corporations dealing in product

⁽²⁸⁾ Lawson (1991a: 191-2, 203) shows that in Keynes's case the pursuit of money is accepted merely as a temporary means for the truly ultimate end, which is the search of 'good' I do not address ethical issues here, nor do I discuss whether the profit motive is irrational or not (see Winslow, 1992: 104-5).

⁽²⁹⁾ The same criticisms apply to Ewijk's (1991: 62) explanation of rule-following in terms of the aim of continuity or survival.

markets within a national economy (for a formal discussion, in varied contexts, see Scharfstein & Stein, 1990). However, in all these cases the objective is assumed to be to protect the person's reputation. A procedure which is rational given this end will not necessarily be so if we consider a different objective, such as the pursuit of pecuniary gain. The reputation argument depends on specific even if quite common institutional settings. Moreover, the combination of reputation and profit considerations is quite complex. Succeeding unconventionally is not necessarily harmful to a person's reputation (see also Choi, 1993), but under uncertainty there are serious doubts about the chances of success.

Concluding remarks

This paper has tried to organize and develop the discussion of what is meant by convention and why and where it would be rational to follow a convention under uncertainty. It has also ultimately pointed out problems in the attempts at rationalizing conventional behaviour. Given the definition of rationality adopted here, according to which rationality requires that deliberate behaviour be based on knowledge and directed at some specified ultimate end (for example, pecuniary gain), all these problems originate from uncertainty and the conception of reality associated with it. Uncertainty poses different specific difficulties for the different arguments, but in general there is the impossibility of completely rationalizing behaviour under uncertainty, since the latter implies some ignorance and limited reliability of the possible knowledge as a guide for behaviour. This applies for whatever knowledge of conventions people may have. For all the arguments, except the workability one, there is also the uncertainty as to whether a convention that has been followed for some time will be maintained.

Conventional behaviour can be seen as rational, but only partially, in the same way as people have only partial knowledge under uncertainty. Accepting this depends on rationality being defined as coming in degrees. However, even if this definition is rejected and behaviour is considered completely rational if, for example, based on whatever knowledge people have under uncertainty, the literature that has argued for the rationality of conventional behaviour should be criticized for neglecting the possible compatibility between unconventional behaviour and rationality. Additionally, this literature typically neglects the deeper cognitive function of conventions and its connections with rationality.

References

- ADRIAANSEN, W., LINDEN, J. (Ed.). Post-Keynesian thought in perspective. Groningen: Wolters-Noordhoff, 1991.
- BINMORE, K. Modeling rational players I. *Economics and Philosophy*, v. 3, n. 2, Oct. 1987
- BROMLEY, D. Economic interests and institutions. Oxford: Blackwell, 1989.
- BROWN-COLLIER, E., BAUSOR, R. The epistemological foundations of *The general theory. Scottish Journal of Political Economy*, v. 35, n. 3, Aug. 1988.
- CARABELLI, A. On Keynes's method. London: Macmillan, 1988.
- CARVALHO, F. On the concept of time in Shacklean and Sraffian economics. *Journal of Post Keynesian Economics*, v. 6, n. 2, Winter 1983/84.
- _____. Mr. Keynes and the post keynesians. Aldershot, UK: Edward Elgar, 1992.
- CHOI, Y. B. Paradigms and conventions. Ann Arbor: University of Michigan Press, 1993.
- CODDINGTON, A. Deficient foresight: a troublesome theme in Keynesian economics. *American Economic Review*, v. 72, n. 3, Jun. 1982.
- CROTTY, J. Are Keynesian uncertainty and macrotheory compatible? Conventional decision making, institutional structures, and conditional stability in Keynesian macromodels. In: DYMSKI, G., POLLIN R. (Ed.). New perspectives in monetary macroeconomics. Ann Arbor: University of Michigan Press, 1994.
- DARITY, W., HORN, B. Rational expectations, rational belief, and Keynes's general theory. Research in the History of Economic Thought and Methodology, v. 11, 1993.
- DAVIDSON, P. Money and the real world. 2nd ed. London: Macmillan, 1978.
- _____. Post Keynesian macroeconomic theory. Aldershot, UK: Edward Elgar, 1994.
- DAVIS, J. B. The locus of Keynes's philosophical thinking in *The general theory*: the concept of convention. *Perspectives on the History of Economic Thought*, v. 10, 1994a.
- _____. Keynes's philosophical development. Cambridge: Cambridge University Press, 1994b.
- (Ed.). The state of interpretation of Keynes. Boston: Kluwer, 1994.
- DEQUECH, D. Rationality and institutions under uncertainty. University of Cambridge, 1998. (PhD dissertation).
- Expectations and confidence under uncertainty. Journal of Post Keynesian Economics, v. 21, n. 3, p. 415-30, Spring 1999a.
- _____. Rationality and irrationality. In: O'HARA, P. (Ed.). Encyclopaedia of political economy. London: Routledge, 1999b. v. 2.

- DEQUECH, D. On some arguments for the rationality of conventional behaviour under uncertainty: concepts, applicability and criticisms. In: KRIESLER, P., SARDONI, C. (Ed.). Keynes, post Keynesianism and political economy: essays in honour of Geoff Harcourt. London: Routledge, 1999c. (forthcoming).
- _____. Uncertainty, conventions and short-term expectations. Revista de Economia Política, 1999d. (forthcoming).
- DOW, A., DOW, S. Animal spirits and rationality. In: LAWSON, T., PESARAN, H. (Ed.). Keynes' economics Methodological issues. Armonk, NY: M. E. Sharpe, 1985.
- DOW, J., WERLANG, S. Nash equilibrium under knightian uncertainty: breaking down backward induction. *Journal of Economic Theory*, v. 64, 1994.
- DOW, S. Uncertainty about uncertainty. In: DOW, S., HILLARD, J. (Ed.). Keynes, knowledge and uncertainty. Aldershot, UK: Edward Elgar, 1995.
- _____, HILLARD, J. (Ed.). Keynes, knowledge and uncertainty. Aldershot, UK: Edward Elgar, 1995.
- DRIVER, C., MORETON, D. Investment, expectations, and uncertainty. Oxford: Blackwell, 1992.
- DUTT, A. K., AMADEO, E. Keynes's third alternative? The neo-Ricardian Keynesians and the post Keynesians. Aldershot, UK: Edward Elgar, 1990.
- DYMSKI, G., POLLIN R. (Ed.). New perspectives in monetary macroeconomics. Ann Arbor: University of Michigan Press, 1994.
- EARL, P., KAY, N. How Economists can accept Shackle's critique of economic doctrines without arguing themselves out of their jobs. *Journal of Economic Studies*, v. 12, n. 1, 1985.
- EPSTEIN, L., WANG, T. "Beliefs about beliefs" without probabilities. *Econometrica*, v. 64, n. 6, p. 1343-73, 1996.
- EWIJK, C. Micro-foundations or macro-dynamics? In: ADRIAANSEN, W., LINDEN, J. (Ed.). *Post-Keynesian thought in perspective*. Groningen: Wolters-Noordhoff, 1991.
- FELTZ, W., HOOGDUIN, L. Rational formation of expectations: Keynesian uncertainty and Davidson's (non)-ergodicity-criterium. *Metroeconomica*, v. 39, n. 2, Jun. 1988.
- FITZGIBBONS, A. Keynes's vision: a new political economy. Oxford: Clarendon Press, 1988.
- FREEDMAN, C. Animal spirits in his soup: a look at the methodology and rhetoric of *The general theory. Journal of Economic Methodology*, v. 2, n. 1, 1995.
- FROWEN, S. (Ed.). Unknowledge and choice in economics. London: Macmillan, 1990.
- FUSFELD, D. Toward a revision of the economic theory of individual behavior. *Journal of Economic Issues*, v. 23, n. 2, Jun. 1989.

GERRARD, B. (Ed.). The economics of rationality. London: Routledge, 1992.
HAMOUDA, O., SMITHIN, J. Some remarks on "uncertainty and economic analysis". Economic Journal, v. 98, Mar. 1988a.
Journal, v. 14, n. 3, Jul./Sept. 1988b.
HARCOURT, G. C. (1981) Marshall, Sraffa and Keynes: incompatible bedfellows? Eastern Economic Journal, v. 7. Reprinted in Harcourt, G. C. (1992).
(Ed.). Keynes and his contemporaries. New York: St. Martin's Press, 1985.
(1987) The legacy of Keynes: theoretical methods and unfinished business. In: REESE, D. (Ed.) (1987). The legacy of Keynes. San Francisco: Harper and Row. Reprinted in Harcourt, G. C. (1992).
On political economists and modern political economy/edited by Claudio Sardoni. London: Routledge, 1992.
, O'SHAUGHNESSY, T. Keynes's unemployment equilibrium: some insights from Joan Robinson, Piero Sraffa and Richard Kahn. In: (Ed.). Keynes and his contemporaries. New York: St. Martin's Press, 1985.
HARCOURT, G. C., RIACH, P. (Ed.). A 'second edition' of <i>The general theory</i> . London: Routledge, 1997. v. 1.
HODGSON, G. Economics and institutions. Philadelphia: University of Philadelphia Press, 1988.
KEYNES, J. M. (1936). The general theory of employment, interest and money. London: Macmillan, 1964. (edition, Harvest/HBJ).
(1937). The general theory of employment. Quarterly Journal of Economics, v. 51, Feb. Reprinted in Keynes, J. M. (1973c).
v. V: A treatise on money. v. 1. London: Macmillan, 1971.
. The collected writings of John Maynard Keynes. London: Macmillan, 1973a. v. VIII: A treatise on probability.
. The collected writings of John Maynard Keynes. London: Macmillan, 1973b. v. XIII.
. The collected writings of John Maynard Keynes. London: Macmillan, 1979. v. XXIX.

KREGEL, J. Markets and institutions as features of a capitalistic production system. Journal of Post Keynesian Economics, v. 3, n. 1, Fall 1980. . On distinguishing between alternative methods of approach to the demand for output as a whole. Australian Economic Papers, v. 20, n. 36, Jun. 1981. Rational spirits and the Post Keynesian macrotheory of microfoundations. De Economist, v. 135, n. 4, 1987. Imagination, exchange and business enterprise in Smith and Shackle. In: FROWEN, S. (Ed.). Unknowledge and choice in economics. London: Macmillan, 1990. LAVOIE, M. Foundations of Post-Keynesian economic analysis. Aldershot, UK: Edward Elgar, 1992. LAWSON, T. Uncertainty and economic analysis. Economic Journal, v. 95, Dec. 1985. . Keynes and the analysis of rational behaviour. In: O'DONNELL, R. (Ed.). Keynes as philosopher-economist. New York: St. Martin's Press, 1991a. _. Reply. In: O'DONNELL, R. (Ed.). Keynes as philosopher-economist. New York: St. Martin's Press, 1991b. _____. Keynes and conventions. Review of Social Economy, v. 51, n. 2, Summer 1993. . Economics and expectations. In: DOW, S., HILLARD, J. (Ed.). Keynes, knowledge and uncertainty. Aldershot, UK: Edward Elgar, 1995. LECQ, F. van der. Conventions and institutions in coordination problems. De Economist, v. 144, n. 3, 1996. LEWIS, D. Convention: a philosophical study. Cambridge: MA: Harvard University Press, 1969. LITTLEBOY, B. On interpreting Keynes. London: Routledge, 1991. LO, K. Equilibrium in beliefs under uncertainty. Journal of Economic Theory, v. 71, p. 443-84, 1996. MCKENNA, E., ZANNONI, D. Philosophical foundations of Post Keynesian economics. Journal of Post Keynesian Economics, v. 15, n. 3, Spring 1993. MEEKS, G. Keynes on the rationality of decision procedures under uncertainty: the investment decision. In: _____ (Ed.). Thoughtful economic man. Cambridge: Cambridge University Press, 1991. MIROWSKI, P. Institutions as a solution concept in a game theory context. In: (Ed.). The reconstruction of economic theory. Boston: Kluwer, 1986.

- NEALE, W. Institutions. *Journal of Economic Issues*, v. 21, n. 3, Sept. Reprinted in Tool, M. (Ed.) (1988). Evolutionary economics v. 1: Foundations of institutional thought. Armonk, NY: M. E. Sharpe, 1987.
- O'DONNELL, R. M. Keynes: philosophy, economics and politics. London: Macmillan, 1989.
- (Ed.). Keynes as philosopher-economist. New York: St. Martin's Press, 1991.
- POSSAS, M. A dinâmica da economia capitalista: uma abordagem teórica. São Paulo: Brasiliense, 1987.
- ______. Rationality and regularity: towards an integration of micro and macrodynamics. Knoxville, TN, 1990. (Presented at the International Workshop in Post Keynesian Economics). (Mimeogr.).
- ROGERS, C. The general theory: existence of a monetary long-period unemployment equilibrium. In: HARCOURT, G. C., RIACH, P. (Ed.). A 'second edition' of *The general theory*. London: Routledge, 1997. v. 1.
- ROTHEIM, R. On the indeterminacy of Keynes's monetary theory of value. Review of Political Economy, v. 5, n. 2, 1993.
- RUNDE, J. Keynesian uncertainty and the instability of beliefs. Review of Political Economy, v. 3, n. 2, 1991.
- RUNDE, J. The Keynesian probability-relation: in search of a substitute. In: ______ (Ed.). The state of interpretation of Keynes. Boston: Kluwer, 1994.
- SCHOTTER, A. The economic theory of social institutions. Cambridge: Cambridge University Press, 1981.
- SCHARFSTEIN, D., STEIN, J. Herd behavior and investment. American Economic Review, v. 80, n. 3, Jun. 1990.
- SHACKLE, G. The years of high theory. Cambridge: Cambridge University Press, 1967.
- . Expectation, enterprise and profit. London: Allen and Unwin, 1970.
- _____. Epistemics and economics. Cambridge: Cambridge University Press, 1972.
- SIMON, H. A behavioral model of rational choice. *Quarterly Journal of Economics*, v. 69, 1955.
- _____. Theories of decision-making in economic and behavioral sciences. *American Economic Review*, v. 49, 1959.
- SUGDEN, R. The economics of rights, co-operation and welfare. Oxford: Blackwell, 1986.
- TOWNSHEND, H. Liquidity premium and the theory of value. *Economic Journal*, n. 47, 1937.

- VICKERS, D. Uncertainty, choice, and the marginal efficiencies. *Journal of Post Keynesian Economics*, v. 2. n. 2, Winter 1979/80.
- _____. Economics and the antagonism of time. Ann Arbor: University of Michigan Press, 1994.
- VROMEN, J. Evolution and efficiency. Delft: Eburon, 1994.
- WINSLOW, T. Organic interdependence, uncertainty and economic analysis. *Economic Journal*, v. 99, Dec. 1989.
- _____. Keynes on rationality. In: GERRARD, B. (Ed.). *The economics of rationality*. London: Routledge, 1992.
- YOUNG, H. P. The economics of convention. *Journal of Economic Perspectives*, v. 10, n. 2, Spring 1996.

TEXTO PARA DISCUSSÃO. IE/UNICAMP

Fazem parte desta Série:

- n. 1 10; 12 19; 21 24; 27; 29; 32; 38; 54 Esgotados.
- n. 11 COSTA, Fernando Nogueira da. (Im)Propriedades da moeda. out./92.
- n. 20 LEAL, João Paulo Garcia. Evolução do comércio exterior sul-coreano de manufaturas segundo suas vantagens comparativas reveladas: 1981-1988. maio/93.
- n. 25 DEQUECH FILHO, David. Salários e absorção de mão-de-obra no Brasil: um exame a partir das regiões metropolitanas. jul./93.
- n. 26 LOPREATO, Francisco Luiz Cazeiro. Crise de financiamento dos governos estaduais (1980/1988). ago./93.
- n. 28 SANTOS FILHO, Otaviano Canuto dos. Technological change and late industrialization: lessons from a post keynesian evolutionary approach. set./93.
- n. 30 LIMA, Gilberto Tadeu. Taxonomy of production economies and monetary determination of effective demand: a puzzle in Keynes'economics. out./93.
- n. 31 BIASOTO JUNIOR, Geraldo. Tributação: princípios, evolução e tendências recentes. nov./93.
- n. 33 SUZIGAN, Wilson & SZMRECSÁNYI, Tamás. Os investimentos estrangeiros no início da industrialização do Brasil. jan./94.
- n. 34 REYDON, Bastiaan Philip. A especulação com terras agrícolas: uma interpretação a partir de um referencial teórico pós-keynesiano. jan./94.
- n. 35 BELIK, Walter. Um estudo sobre o financiamento da política agroindustrial no Brasil (1965-87). abr./94.
- n. 36 HIGACHI, Hermes Yukio. Estratégias das empresas líderes na indústria brasileira do papel. maio/94.
- n. 37 COUTINHO, Mauricio Chalfin. Marx e a economia política clássica: trabalho e propriedade. maio/94.
- n. 39 CINTRA, Marcos Antonio Macedo. Uma visão crítica da teoria da repressão financeira. jul./94.
- n. 40 MATIJASCIC, Milko. Fundos de pensão e rearticulação da economia brasileira. jul./94.
- n. 41 CORSI, Francisco Luiz. As discussões em torno dos rumos da economia brasileira ao final do Estado Novo. jul/94
- n. 42 GRAZIANO DA SILVA, José. A formação de preços dos produtos agrícolas: notas para discussão de uma abordagem alternativa. nov./94
- n. 43 LOPREATO, Francisco Luiz. Dificuldades e perspectivas dos bancos estaduais. nov./94.
- n. 44 BRANDÃO,Sandra Márcia Chagas. Políticas salarial e negociações coletivas: a experiência das categorias profissionais metalúrgicas e têxtil do município de São Paulo no período 1978-89. dez/94.
- n. 45 CANUTO, Otaviano. Um modelo de crescimento endógeno com microfundamentos evolucionistas. jan./95.