

1 *Reality (and Not Simply Abstract Rationality) as the Starting Point of Economic Theory*

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1.1 Introduction

The first item in Luigi Pasinetti's 'series of essential building blocks belonging to an alternative economic paradigm, with respect to the neoclassical one' is 'Reality (and not simply abstract rationality) as the starting point of economic theory' (Pasinetti, 2007, p. 219). He makes it clear that his attempt to single out the 'most important basic features of the "Cambridge Keynesian school"' is based on his own personal perception, so that 'the list [of the essential building blocks] need not be an exhaustive one; even less need it be one that would be found in the works of the members of the group (who neglected this aspect), or one that all of them would have endorsed at first sight' (Pasinetti, 2007, p. 219). With this in mind, let us see how Pasinetti explains what he means by *Reality*:

The whole school always showed a strong aversion to a purely imaginary world of rationally behaving individuals, that, though fulfilling the rules of logic, does not show respect for facts. The conviction has always been that any theory needs to be based on factual evidence, to be evaluated right from the start and not only to be empirically tested at the end. (Pasinetti, 2007, p. 220)

Pasinetti's plea is for a theory which is 'firmly placed on an objective foundational framework' (Pasinetti, 2007, p. 219) rather than fictional reality.

This is clearly a rebuttal of the well-known approach advocated by Milton Friedman, according to which unrealistic assumptions do not matter, while predictive success is all that matters in assessing a theory;

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and, of course, it concerns an issue on which an ample literature has grown. In recent times, attention has turned to the notion of ‘realism’ in connection with general philosophical issues in general and philosophy of science and philosophy of economics in particular, such as ontological beliefs, modelling and mathematical rigour.¹

For the purpose of this chapter, the scope of the discussion is much narrower. In fact, Pasinetti’s plea is to discard not just the descriptive unrealism of assumptions in general but one assumption in particular: the ‘purely imaginary world of rationally behaving individuals’ (Pasinetti, 2007, p. 220). Truly, the assumption of rationally behaving individuals has been challenged in various strands of modern theory, notably experimental and behavioural economics, which have produced evidence that people often behave in ways that contradict the rationality principle. However, here Pasinetti is referring to something that he believes was typical of the ‘Cambridge Keynesians’,² namely, their placing at the centre of the analysis not abstract entities but flesh-and-blood economic agents acting in various specific markets.

The unrealism of the assumption of rationally behaving individuals lies not in its limited descriptive nature, which may be necessary for the sake of simplicity and supposed generality, but in the fabrication of an imaginary world rather than taking the world that we actually experience as the frame of reference. The fabrication of an imaginary world is often necessary to support a particular theory. This was an argument put forward by Piero Sraffa against Alfred Marshall’s derivation of the equilibrium of the firm in competitive conditions in his 1925 and 1926 articles to show the unrealism of the assumptions behind it. As he famously concludes the 1930 symposium:

I am trying to find what are the assumptions implicit in Marshall’s theory; if Mr. Robertson regards them as extremely unreal, I sympathise with him. We seem to be agreed that the theory cannot be interpreted in a way which makes it logically self-consistent and, at the same time, reconciles it with the facts it sets out to explain. Mr. Robertson’s remedy is to discard

¹ A useful review of several of these issues can be found in Mäki (2009). Lawson (1997) offers the most comprehensive discussion of the question of realism in economics.

² I have argued elsewhere that this is a misnomer, since Pasinetti includes Sraffa, who, although personally and intellectually close to John Maynard Keynes, can hardly be called a Keynesian (see Marcuzzo, 2014).

mathematics, and he suggests that my remedy is to discard the facts; perhaps I ought to have explained that, in the circumstances, I think it is Marshall's theory that should be discarded. (Sraffa, 1930, p. 93)

A similar argument was used by Keynes to say that the

classical theorists resemble Euclidean geometers in a non-Euclidean world who, discovering that in experience straight lines apparently parallel often meet, rebuke the lines for not keeping straight – as the only remedy for the unfortunate collisions which are occurring. Yet, in truth, there is no remedy except to throw over the axiom of parallels and to work out a non-Euclidean geometry. (CWK, VII, p. 16)

In this chapter, I will give a few examples of how rejection of 'abstract rationality' was put in practice by some authors in the Cambridge tradition. One is their interpretation of the maximisation rule of behaviour in a less precise and deterministic form. Although we find rejection of marginal calculation *in toto* only in the case of Sraffa, in Marshall and even more so in Keynes and Richard Kahn (the two other authors I will consider here as representative), maximisation is seen as the result of a 'trial and error' method and therefore hardly a comprehensive explanation of economic behaviour.

An example of rejection of abstract rationality is provided by Kahn in the case of investors' decisions in the money market. In his 1954 article on liquidity preference, Kahn argues that decisions are not optimising choices on the basis of identification of certain behavioural functions but rather constrained choices by individuals who are often divided by best guesses and uncertainty (Kahn, 1954). Here, of course, Kahn extends Keynes's vision of decision-making based on his notion of probability, but since it is perhaps a less known example of its application, it may merit closer consideration.

Finally, as another example, I take an interpretation of rationality by Keynes resulting from the awareness that the consequences of following individual self-interest are not always for the collective good. This applies equally to both the economic sphere (the fallacy of composition) and the political sphere, where reasonableness rather than rationality is the moral quality which addresses the collective good instead of individual benefit.

There are, of course, other examples of criticism of the assumptions in neoclassical theory that were raised by other protagonists of the Cambridge school. Prominent in this respect are Joan Robinson's

repeated attacks on the notion of equilibrium, because it suggests imaginary movements in time and disregards movements which happen in history (see Marcuzzo, 2020). Also, Nicholas Kaldor's insistence on cumulative causation can be seen as an attempt to bring realistic assumptions into theoretical analysis. However, in this chapter, I narrow the focus to include fewer authors and examples; therefore, my presentation is neither to be taken as inclusive nor to be considered exhaustive.

1.2 From Marshall to Keynes: Profit Maximisation as a 'Trial and Error' Method

In Marshall, we find the entrepreneur described as possessing special qualities such as 'knowledge of things in his own trade', 'power of forecasting the broad movements of production and consumption' and the ability 'to judge cautiously and undertake risks boldly' (Marshall, 1920, p. 297). As far as his rule of behaviour is concerned, Marshall pointed out,

Every business man . . . estimates as best he can how much net product (i.e. net addition to the value of his total product) will be caused by a certain extra use of anyone agent He endeavours to employ each agent up to that margin at which its net product would no longer exceed the price he would have to pay for it. He works generally by trained instinct rather than formal calculation. (Marshall, 1920, p. 406)

When describing the entrepreneur's behaviour in the real world, the marginal rule becomes a matter of balancing the 'advantages' against 'disadvantages' of a change in a given situation or action. The equalisation of two exact magnitudes, such as marginal revenue ('net product' in Marshall's terminology) and marginal cost, is brought in only in determination of the equilibrium of the firm. However, Marshall looked to other factors to explain what guides business behaviour, attributing greater importance to the influence of habits and customs, to the institutional context and to business 'connections' (see, for example, Marshall, 1919, p. 196), meaning by this an extended knowledge of the market in which the businessman is operating, in all its technical and interpersonal aspects (see Becattini, 1962).

In the same vein, Kahn interpreted the profit maximisation rule not as a calculation actually and consciously undertaken by businessmen

but as a 'trial and error' method. In his dissertation, 'The Economics of the Short Period', for instance, he wrote, 'instincts and intuitions will secure adherence to marginal principle in action when conscious apprehension is impossible. And, failing those, we may rely on the method of trial and error; experience, embodied in rule of thumb, will often indicate how profits may be maximised' (Kahn, 1989, p. 162).

Against the evidence that businessmen usually state that they consider average rather than marginal cost, he argued that 'it is the consequences of business men's individual acts, not of their general theories, with which we have to reckon' (Kahn, 1989, p. 159). Kahn's point is that proof that actual behaviour does in fact follow the marginal rule lies in 'success' in business, so profit maximisation as the only rule that is consistent with rationality is seen not as an assumption that describes how businesses behave but as the rule which, if followed, would guarantee maximum profit. Moreover, since firms do not know their individual demand curve, Kahn asked, how can it be supposed that it forms the basis for the search for the point of intersection with the marginal cost curve? Kahn claims that what matters is 'the business man's conception of his individual demand curve' arrived at by 'the method of trial and error'; thus, the only relevant assumptions are those 'that are in the mind of the business man when he maximizes his profit' (Kahn, 1989, p. 101).

In conclusion, Kahn always stressed the aspect of rationality which finds expression in the 'trial and error' method rather than in the optimising choice between possible and known alternatives. This 'rationality' pursued through trial and error works on the basis of the 'rewards' and 'punishments' of the competitive mechanism in more or less perfect markets.

This approach to the matter explains why Kahn was critical of mark-up pricing and remained faithful to the profit maximisation approach also in the cases of duopoly and a kinked demand curve, of which he was the inventor. He wrote: '[The kinked demand curve] is compatible with the traditional hypothesis of profit maximization . . . all that the kinked demand curve explains is why the price remains where it is (for no other reason than that it happens to be there) until something happens to cause it to alter' (Kahn, 1952, p. 122).

In this view, profit maximisation is a rationalisation, not a description of actual behaviour. Kahn goes so far as to indicate that it is a false rationalisation, because the *marginal cost = marginal revenue* formula

is followed by entrepreneurs by ‘instinct rather than reasoning’ (Kahn, 1952, p. 126), and it should be more generally interpreted as an ex post outcome which is attained by repeated attempts: ‘Put in that more homely form, the concept [profit maximisation] does readily lend itself to the operation of the forces of trial and error, and to the display of *flair* – the success of which by no means depends upon the manner in which it is rationalized’ (Kahn, 1952, p. 127).³

Now, turning to Keynes, it can readily be seen that he employed marginal language quite sparingly; reliance on the Marshallian apparatus – demand and supply curves – and acceptance of the ‘classical’ postulates are, in fact, limited in *General Theory*, probably also under the influence of Kahn, who remained persuaded of the validity of the Marshallian framework, which he saw no reason to discard. As I have argued elsewhere, Kahn might have had an influence on Keynes’s choice ‘to transform certain concepts into precise analytical tools [...] to obtain logically coherent results’ (Marcuzzo, 2002, p. 445).

Even neglecting the influence that Kahn might have had on the matter, it is possible that the assumptions behind profit maximisation appeared to Keynes to be sufficiently explicit and general to make them acceptable, while other ‘tacit assumptions are seldom or never satisfied, with the result that it cannot solve the economic problems of the actual world’ (CWK, VII, p. 378).

Here we can measure the distance from Sraffa who, in the same years, was starting to attack marginal analysis at its foundations (Marcuzzo and Rosselli, 2016), evidently never managing fully to persuade Keynes of the need to discard it.

On the other hand, Keynes’s path-breaking views on investment decisions and the determination of its prospective yields point to the influence of expectations and uncertainty in economic calculation and the role of speculation. In the *General Theory*, investment decisions, as opposed to determination of the level of individual output, are never made on ‘a precise calculation of prospective profit’: they are the outcome of a sort of probability calculation in which

even after the event no one would know whether the average results in terms of the sums invested had exceeded, equalled or fallen short of the prevailing rate of interest If human nature felt no temptation to take a chance, no

³ For a more extended analysis of these points, see Marcuzzo and Sanfilippo (2006).

satisfaction (profit apart) in constructing a factory, a railway, a mine or a farm, there might not be much investment merely as a result of cold calculation. (CWK, VII, p. 150)

Another instance is the description of investment decision as guessing the prospective yields on the basis of a rational conjecture, taking into account the degree of ignorance of the causes influencing the results, through a procedure similar to trial and error. As Keynes wrote in a famous passage in the *General Theory*, ‘our decisions to do something positive, the full consequences of which will be drawn out over many days to come [are not] the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities’ (CWK, VII, p. 161).

This passage is clear evidence of Keynes’s rejection of taking abstract rationality to represent what is behind entrepreneurs’ actions; however, it is not a belief in the ‘irrational’ nature of the entrepreneur’s decision process but a belief in a concept of constrained rationality, because of uncertainty and limited knowledge, which nevertheless is still an active factor in business choices.

As Roncaglia effectively puts it,

In Keynes’s theory of probability, there is no objective rule to establish how the empirical evidence should affect the probability statement, or as to how additional evidence should change it. Thus, no bi-univocal correspondence can be established between evidence and a ‘rational’ probability statement. However, in Keynes’s mind there clearly is the idea that the subject must somehow take the available evidence into account. In fact, together with internal consistency (no contradictions) in the system of beliefs, this is what distinguishes rational from irrational behaviour. (Roncaglia, 2012, pp. 448–449)

1.3 Sraffa’s Alternative

A more radical stance against marginal calculation to describe business behaviour was taken by Sraffa, as evidenced in his unpublished papers. Sraffa often argued that in economics it is not possible to resort to infinitesimal calculus, because variations are highly unlikely to come about in a continuous manner but rather occur in discrete form and, more importantly, because change hardly ever takes the form of variations in magnitudes that leave the overall structure unchanged.

Economic changes in one variable affect the whole structure; this is one of the reasons why the marginal analysis is ill-founded: ‘Where marginalism goes astray is in (falsely) assuming . . . that it has general applicability whereas in fact it only applies exceptionally (in cases where partial change is feasible, there is independence, the whole is not affected)’ (D3/12/42.9).⁴

On various occasions over the years, Sraffa objected to Marshall’s use of the case of an ‘alert’ railway manager who deals with the increasing number of passengers by altering the composition and size of carriages in a train, ‘constantly weighing the net product in saving of time and of annoyance to passengers, that will accrue from the aid of a second guard on an important train and considering whether it will be worth its costs’ (Marshall, 1920, p. 427).

This was an example to which Sraffa returned many times; as late as 1963 we find him arguing that

his [the alert manager’s] main task is to sack a porter here, add a coach to a train there, or shorten a platform elsewhere. The idea is that the process of change can be reduced to a continuous process, like shortening platforms: ‘a penny is the basis of a million’, and so a process of shortening, adding[,] sacking in detail is the route from one position to another. (D3/12/42.12)

In conclusion, even if supply and demand functions (for goods and factors) were continuous so that marginal calculus were applicable, there would still be one obstacle to adopting it as method in economic analysis, ‘even if the external circumstances were the same, the result would be different because man learns from experience, or at any rate is changed by it, forms and transforms habits, etc.’ (D3/12/42/11 recto).

There is no place for abstract rationality in *Production of Commodities* since there are no explicit behavioural assumptions in the book and prices and distribution are determined by none of them. Even the uniformity of the rate of profit is not described as the outcome of a process in time but is assumed to be prevailing, and what we are given is just a ‘photograph’ at one instant in time.⁵ When working on

⁴ References to the Sraffa Papers, which are kept at Trinity College Library, Cambridge, most of them available online, are given hereafter following the catalogue classification.

⁵ This is a disputed issue in the literature, beyond my scope here. For a recent and controversial discussion of this point, see Sinha (2016).

his equations, Sraffa was troubled by the idea of introducing a subjective element in the mechanism of price determination, in the shape of ‘inducement’ for capitalists to move from lower to higher rate of profit industries. In a 1931 manuscript, we read: ‘The assumption (in the 2nd equations) that the rate of interest (surplus) is equal in different industries is too much [*sic*] rationalistic: it assumes that the capitalists are “perfect economic men”, who *move* their capital accordingly’ (D3/12/9:9).

This is not to say that Sraffa’s vision excludes subjective or purely mental forces at work in the real world (such as expectations, beliefs or motivations) but only that these ‘magnitudes’ are neither observable nor measurable and so cannot form the basis of scientific explanations according to Sraffa’s own epistemology. Among the notes taken between May and July 1928, we read: ‘the recognition of the fact that the opinions of the actors have an influence must not lead the economist to believe that they are all the real facts themselves, or much less their objective explanation, as Marshall does’ (D3/12/9/32).

In conclusion, while Marshall, Kahn and Keynes held that subjective elements – albeit not in the form of abstract rationality – need to be part of the *explanans* of the decision-making mechanism that lies behind market outcomes, Sraffa did not deem them necessary as far as the price mechanism was concerned but left open the possibility that norms and customs, embodying non-observable entities, exercise their influence in other parts of the analysis.

1.4 The Real versus the Imaginary World in Which Decisions Are Taken

Kahn dropped the strict ‘maximising rule’ altogether when analysing entrepreneurs’ behaviour and investment decisions in financial markets. The existence of uncertainty and various degrees of conviction with which opinions are formed and held by individuals makes the decision process similar not to an optimum solution but rather to a condition reached when sufficiently strong motives to do otherwise are lacking.

Kahn is depicting a ‘world in which different persons hold different views and none of them hold any views with complete conviction . . . a world of doubt and disagreement and one in which different persons not only take different views which are influenced by different degrees

of conviction, but are sensitive to risk in different ways' (Kahn, 1954, pp. 235–236). Kahn contrasts it with 'an *imaginary* world of expectations held with unanimous and complete conviction' (Kahn, 1954, pp. 235–236, my italics).

In financial markets, we encounter two kinds of investors: those who hold definite expectations for the future of interest rates and those 'who do not have a clue' whether the rate of interest is going to increase or decrease. The same division also exists in the mind of an individual investor, who can have contradictory preferences and decide to hold money and securities at the same time, with no definite choice between the two. It is as if each individual investor always had two opinions – as first degree (best guess) and second degree (conviction) – on buying, selling or keeping securities as an alternative to money. While the first-degree opinion – that is, whether to be bullish or bearish according to the kind of forecast of the future trend in security prices – may be taken to point to the path to follow, the second-degree opinion is the doubt that clouds the forecast.

Thus, Kahn argues that a finite elasticity of the demand for money relative to the rate of interest is associated not only with the heterogeneity of expectations held by the public divided between bulls and bears but also with the lack of conviction individuals show in their own conjectures. It is as if bullish and bearish sentiments 'operated inside each person's mind, one being responsible for his holding securities and one for his holding money' (Kahn, 1954, p. 247).

It follows that the guiding behaviour of an individual cannot be represented as in the case of complete preferences, since the individual is confronted with several feasible positions which could be equally preferred; it is the degree of conviction of one's expectations of the future course of events which may alter the order of preferences and therefore the choice between money and securities.

As Dardi explained:

In Kahn's approach the chosen position, although – one may assume – maximal in the individual preferences, does not necessarily dominate all the non-maximal positions that are feasible in the circumstances ... the fact that individuals, from the position they are in, do not find other feasible positions interesting, does not mean that if they were in one of these positions they would want to move towards the position where they in fact are. What we may say is that they prefer to retain the asset composition they have, not that they have the asset composition they prefer. (Dardi, 1994, p. 96)

Rational behaviour becomes the ‘best possible action’ in the circumstances, characterised – in the real world – by doubts about the reliability of one’s own expectations.

1.5 Reasonableness⁶

Just as utilitarian calculus may not be the best rule for action in individual decision-making on investments, Keynes contended that it may prove equally unsuitable in other situations where following the rationality implied by economic theory might lead to very unsatisfactory outcomes.

The rational pursuit of individual interest in economics, according to the utilitarian creed, does not guarantee the collective good, which Keynes identified with full employment. It is an assumption that leads to a false notion, which Keynes identifies as the fallacy of composition. For instance, attempts to reduce real wages or increase the saving of individuals on the basis of an individual rationale will not achieve the aim if undertaken by all, since the aggregate prevails over the individual effect. Another example is when the level of aggregate demand is kept drastically low within a country to satisfy the concerns of the victor or creditor, leading to a deflationary potential for all the economies. Thus, lack of reasonableness leads to consequences that are not only morally reprehensible but also economically disastrous for anyone who has sought guidance solely from the individual point of view.

Keynes rejected utilitarianism, both in ethics and in politics, nor did he endorse consequentialism in his ethical philosophy, but he accepted it in his political philosophy, the purpose of which, he believed, was to provide reasons for action. According to Keynes, the goal of an ethically rational society could be achieved by overcoming the economic and moral obstacles that encumbered contemporary society. Keynes’s appeal to overcome self-interest as the sole guide to action was made in the context of both internal and external economic problems. As far as full-employment policy was concerned, he endeavoured to persuade his ‘countrymen and the world at large to change their traditional doctrines and, by taking better thought, to remove the curse of unemployment’ (CWK, xxvi, p.16). In the case of post-First and

⁶ This section draws on Marcuzzo (2010), (2018).

Second World War scenarios, he fought to persuade governments that it was ‘only by a more comprehensive settlement, which attempts to offer everyone what is reasonable, and so far as we can make it fair, that the financial consequences of the war can be liquidated’ (CWK, xxiv, pp. 291–292).

Keynes systematically applied the term *reasonable*, often in contrast with the reasons of the victor or creditor, to a guideline *not* characterised by utilitarian calculation, which may prove only apparently to be in the individual interest. Thus, reasonable action is guided by judgement, taking into account contingent, mutable circumstances as far as our knowledge can encompass the facts and it conforms to goals that are attainable only by moving beyond individualistic motivation or utilitarian calculation.

The same term was used by John Rawls in defining the characteristics of a plural and *just* society. In his book *Political Liberalism* we find this definition: ‘The reasonable is an element of the idea of society as a system of fair cooperation and that its fair terms be reasonable for all to accept is part of its idea of reciprocity’ (Rawls, 1993, p. 58).

But how exactly are we to take the term *reasonable*? Jürgen Habermas interprets it as distinguishing between those who accept the principle of *fairness and cooperation* and those who act *rationally* on the basis of their *own* (i.e., individual) conception of what is *good and just*. Thus, being *reasonable* is a moral quality lacking in those who behave in a solely rational way. To quote Rawls again: ‘What rational agents lack is the particular form of moral sensibility that underlies the desire to engage in fair cooperation as such, and to do so on terms that others as equals might reasonably be expected to endorse’ (Rawls, 1993, p. 51). This is, also according to Habermas, the source of the distinction between moral and ethical questions (Habermas, 1995, p. 125).

Questions of justice or moral questions lead to justifiable answers – justifiable in the sense of rational acceptability – because they are concerned with what, from an ideally expanded perspective, is in the equal interest of all. Ethical questions, by contrast, do not lend themselves to such impartial treatment because they refer to what, from the first-person perspective, is in the long run good for me or for us – even if this is not equally good for all. The sense Keynes attributes to the term *reasonable* shows a strong analogy with the quality described by

Rawls and interpreted by Habermas as *moral*, but it is anchored on the structure of his economic theory.

1.6 Possible Objections⁷

Having offered some examples that, I believe, may bear out Pasinetti's claim that 'The whole [Cambridge] school always showed a strong aversion to a purely imaginary world of rationally behaving individuals' (Pasinetti, 2007, p. 220), perhaps we should also consider the objections that may be (and in some cases have in fact been) raised against this idea.

First of all, it may be argued that it is not the assumption of rationality or of optimisation *per se* that is to be rejected, but their application to unsuitable contexts, where uncertainty and limited information dominate; the approach taken by Kahn and Keynes to financial markets can be seen as an attempt to demonstrate the unsuitability of those assumptions to explain the behaviour of speculators and investors. Marshall's attention to other factors to explain what guides business behaviour might also be interpreted not as a rejection of the rationality principle but as indicative of its limited explicatory power.

An objection to the interpretation of the profit maximisation rule as a 'trial and error' method and as typical of the Cambridge approach is that a number of neoclassical economists also seldom interpret the optimising behaviour as actual, conscious calculation by economic agents. This point was made clear by Fritz Machlup (1946) in his famous article 'Marginal Analysis and Empirical Research', where he stressed that in neoclassical economics trial and error rather than a strict calculus is the assumed pricing method. He writes, 'The business man who equates marginal net revenue productivity and marginal factor cost when he decides how many to employ need not engage in higher mathematics, geometry, or clairvoyance ... he would simply rely on his sense or his 'feel' of the situation (Machlup 1946, p. 535).'

He emphasized that it is not with businessmen's rationalization of their actions but with their actual behaviour that marginal analysis is concerned: 'The technical terms used in the explanation of an action need not have any part in the thinking of the acting individual.' (Machlup, 1946, p. 537)

⁷ I am grateful to Dardi for making me take these objections into consideration.

Nevertheless, it seems to me that the ‘trial and error’ message gets lost in the constructions of models for the purpose of empirical testing, which is the standard approach in neoclassical economics, since the theoretical underpinnings of those models and their application in practice boil down to the solution of a standard max profit exercise. So the caveats and the awareness that precise calculation is neither in the minds of the agents nor the realistic representation of their behaviour cannot be taken as an opening to less stringent assumptions, since they do not find their way into the working of these models.

Coming to the notion of Keynes’s ‘animal spirits’ as an alternative explanation of the guiding principle of entrepreneurial action, I think it should not be applied as a general rule, since the prospective yields of an investment retain a role in decision-making. I believe that investment decisions cannot be anchored on vague, psychological inclinations; and, in fact, recent interpretations of Keynes’s theory may be seriously misleading (see, e.g., Akerlof and Shiller [2009]).

Finally, to the argument that I have put forward in relation to Keynes’s and Kahn’s theory – that the existence of uncertainty and various degrees of conviction with which opinions are formed and held by individuals makes the decision process similar not to an optimum solution but rather to a condition reached when sufficiently strong motives to do otherwise are lacking – it may be retorted that it is not a confutation of the maximisation rule but only a specification of its form. When the ordering is not completed, choices may be maximal in the individual preferences, although they do not necessarily dominate all the non-maximal positions that are feasible in the circumstances. So uncertainty and conflicting expectations may not be the reasons to dismiss rationality as a principle guiding individual action, since they simply reveal its more restricted applicability.

However, I believe that the two notions of rationality (according to Keynes and according to standard theory) should be distinguished. It is not just a matter of the context to which it applies or the completeness of the set of preferences but the fact of the rationality principle being embedded in the utilitarian approach within the neoclassical approach, while in Keynes there is no such connection.

Finally, on the notion of reasonableness to be contrasted to the notion of rationality, it may be objected that this is not something very different from the classic case of the prisoner’s dilemma, which demonstrates that when there is conflict between individual rationality and

collective rationality it can be resolved only by moral commitments or social sanctions. I agree that by following the game theory approach we get the same results and implications; but in Keynes's case, there is a much clearer focus on the consequences of decisions guided by self-interest and the role that persuasion can have in preventing their occurrences is that of a protagonist.

1.7 Conclusions

The Marshallian approach to economic behaviour as guided by customs and habits setting limits to the crude maximisation through marginal analysis was inherited by Kahn and Keynes, who accepted it in its modified form, namely, not as exact calculation but as the outcome of a trial and error method. Although they did not endorse Sraffa's rejection of its validity for price determination and income distribution, they shared the common objective of placing reality, rather than abstract rationality, at the centre of their analysis as the principle guiding behaviour. In other words, what characterises the approach is a vision of individuals less stereotyped than mere maximising machines. This means that there is room for rationality in depicting political and economic decisions, as long as we interpret it as constrained by limited knowledge, uncertainty.

On the contrary, rationality and optimal behaviour are twin concepts which are at the core of neoclassical economics, the latter being the consequence of the former; both presuppose perfect knowledge and a complete set of preferences, so that inconsistencies in choices can be ruled out. This is what I believe Pasinetti means by 'abstract' rationality. Pasinetti explicitly refers to Keynes as exemplary of the approach to analysing economic behaviour, never imputing it to abstract economic agents but always to individuals who have specific functions and characteristics, where customs, conventions and habits play an important part. Moreover, consumers, entrepreneurs or speculators always make their decisions in the face of uncertainty and limited knowledge, so their behaviour cannot be fully described as guided by an optimising rationality. Economic choices require evaluation of the available information, which is often contradictory or ambiguous and almost always offers insufficient evidence to predict the future course of events. In each specific case, the evidence we collect bears a different 'weight' in the argument we use to make our choices, on the basis of our knowledge and experience.

However, decision-making in a context of uncertainty does not imply the impossibility of making decisions according to reason, although the reason involved here is not the rationality employed in orthodox economic theory where, for instance, consumers are said to pursue their individual maximising utility over an infinite time horizon and with full knowledge of possible outcomes and perfect foresight.

Once these and other similar assumptions are discarded – being seen as belonging to an imaginary world, not a real one – the concept of rationality may still be used to describe behaviour but in a much more circumscribed sense. It may give rise to trial and error methods, conditional guessing or reasonableness, following a tradition which – bypassing the neoclassical parables – goes back to Classical Political Economy. In fact, the possibility of coupling the Cambridge approach and Classical Political Economy in the construction of a paradigm alternative to neoclassical economy has been an article of faith for Pasinetti, pursued throughout a lifetime's work.

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