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Against Rigid Rules – Keynes's economic theory.

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Against rigid rules - Keynes's economic theory.

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Abstract
This paper provides textual evidence of Keynes´s position on monetary policy and shaping international monetary relations. One result of my contribution is that the famous dichotomy "rules versus discretion" is of no relevance to his economic theory, because he used the term "rules" not in the meaning of a formal brilliantly designed notion. He definitely made a distinction between non-rigidly-fixed-rules *and* discretion. I give an explanation why his economic theory is not compatible with principles of constructivism, empiricism and ontological realism by referring to a key term of his economic writings, i.e., discretionary decision.

Contre les lois rigides - La théorie économique de Keynes

Par Elke Muchlinski

Termes clefs : Histoire de la pensée économique depuis 1925, méthodologie, Banque centrale, accords et institutions monétaires internationaux.

Abstract
Par le recours à l'un des termes clés des écrits économiques de Keynes - la décision discrétionnaire –, cet article montre que sa théorie économique n'est pas compatible avec les principes du constructivisme, de l'empirisme et du réalisme ontologique. Les textes de Keynes concernant sa position sur la politique monétaire et la formation des relations monétaires internationales en fournissent la preuve.
L'un des résultats de cet article est le constat que la fameuse dichotomie "lois *versus* discrétion" n'est absolument pas pertinente pour interpréter la théorie économique de Keynes, il n'utilise pas en effet le terme de "loi" dans le sens d'une notion formelle qui serait parfaitement définie. Toutefois, il fait sans aucun doute une distinction entre les lois fixées de manière non rigide et la notion de discrétion.

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I. Introduction

The focus of my paper is to explain why Keynes's economic theory is not compatible with principles of constructivism, ontological realism and empiricism by sketching his view on "rules" in monetary policy and international monetary relations. There is no controversy about this point: the term *uncertainty* is the *hard core* of Keynes´s economic analysis. I am going to link Keynes's economic theory loosely to an academic discourse on the question if economic theory should become a hard science or a formal brilliantly designed theory (D' Autume/Cartelier 1997; Duménil/Lévy 1997). Any reference to formal aestheticism or rigidly defined concepts seems to imply an inadequate interpretation of his work. Keynes´s objections to formal aestheticism trace back to his view that economics is a soft science. Economic theory lacks fundamental presumptions which are indeed necessary to construct a hard science. All "numbers by painting" or "painting by numbers", as Vickers currently commented, have to refer to contemporary word, i.e., the perceived world.

Of course after more than seven decades since Keynes wrote his contributions, a link to the present debates should be as cautious as possible. The prominent way of asking, what he *really*, *really meant*, is not the way to be chosen in my paper since there will never be an answer.[2] Therefore I contrast issues of old and new debates because any reading of any piece of Keynes 's work is inevitably subject to an interpretation of the meaning of it (Rorty 1991).

The paper starts with a short description of the "rules versus discretion" debate in part 2. Part 3 points to present debates. Part 4 refers to Keynes' work on monetary policy and international monetary policy. Part 5 provides a brief discussion of the meaning and terms of ontologicial realism, empiricism and constructivism. In Part 6, then I am going to explain why Keynes concepts and economic theory go beyond those views outlined in part 5 part, which from a methodological point of view implies that his view is compatible with economics as a social science. Finally, I will present my concluding thoughts in part 7.

II. Notes On "Rules *versus* Discretion"

Historical lines of the debate on "rules *versus* discretion" document several re-constructions of the meaning of both the debate itself and the term "rule" and "discretion". The roots of the "rules versus discretion" debate trace back to an argument between advocats

[2] See Moggridge (2002).

of the "Banking School" and "Currency School". A modern interpretation of this controversy differentiates between those adherents favoring rules on monetary policy and international monetary system, and those favoring discretionary monetary standards. *Rules* in international monetary relations are determined to mitigate exchange rate movements (gold standard, fixed exchange rates, adjustable pegs) and to avoid balance of payments imbalances (McKinnon 1993). In some theories, rules in monetary policy are interpreted as a method to restrict discretionary decisions of central bankers. These views entail an implicit assumption which inevitably depend on certain theories about the function of central banks as independent institutions.[3]

The trade-off between rules and discretion trace back to Simon's work in 1936. According to the quantity theory, Simons countered that the quantity of money cannot be constructed as a rigidly fixed quantity as adherents used to do. Simons argued that the quantity itself is fragile, because it is dependent on the velocity of money, which cannot be anticipated with certainty. Any coherent view, then must recognise that the market will respond not to the fixed nature of quantity ("numbers by painting") but to the central bank policy.

There is no doubt that the interpretation and meaning of "rules versus discretion" has been changed throughout past decades. One standard interpretation differentiates between fixed, i.e., non-reactive rules, which define a path of instruments or targets without any reference to the observed situation and a non-fixed reactive rules, which implies the response reaction due to the observed situation. Whereas the non-reactive rule focuses rigidly on the implementation of the rule itself, the reactive rule focuses on the announced target by using reactive methods of adaptability. In the view of New Classical Macroeconomic (NCM) paradigm, the market is certainly acquainted with these modes of reactions, consequently, reactive rules are also defined as "feed-back rules". Contrary to this, discretionary decisions are interpreted as decisions based on perceived situations, as Tobin said: "unconstrained by rules of either kind" (Tobin 1983, p. 507).

A common sense statement today is, that no central bank wants fixed rules. Why, then, do we talk about fixed rules? "Simplicity gives them their political appeal and power" (Tobin 1983, p. 508). According to the interpretation given by the NCM, Blinder pointed out: "In case of the modern incarnation of the rules versus discretion debate, based on time

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[3] There is no space and time to discuss this point here; see Blinder (1998), Muchlinski (2001, 2001b).

inconsistency, I have argued that things are starkly different. In my view, the academic literature has focused on either the wrong problem or a non problem and has proposed a variety of solutions (excluding Rogoff's conservative central bankers) that make little sense in the real world" (Blinder 1998, p. 50).[4] At this point, the distinction "rules versus discretion" applied to monetary theory by Kydland/Prescott (1977) and perpetuated by Barro/Gordon (1983) finally seems to be dead.

III. On State-Contingent Rules *and* Discretion

I would like to turn briefly to a new research on the Keynes-White-Plan. Boughton stated, "Keynes articulated a (…) proposal for state-contingent policy rules published *in Lloyd' s Bank Monthly Review* " (Boughton 2002, p. 6; Keynes *C.W.*, XXI, pp. 360-369).[5] What is a state-contingent rule? King explained, "the choice of monetary strategy is often described as a choice between rules and discretion (…). The optimal strategy is a state-contingent rule, which allows flexibility in the response of policy to shocks while retaining a credible commitment to price stability" (1997, p. 94). Therefore, "state-contingent rule" is to be seen as an optimal strategy, which allows flexible responses by the central bank to shocks without jeopardizing their goal of price stability.

I would like to give some additional information on this "state-contingent rule". It is based on the "rational expectations hypothesis". In particular models of monetary policy the "rational expectations hypothesis" (REH) is required for the sake of model consistency and as a constitutive element of monetary policy itself. In this theoretical approach, central bankers are configured as representative agents. The "state-contingent-rule" makes sense within this particular theoretical approach to monetary policy based on the "rational expectations hypothesis", acted out by *representative agents*.[6] The promise of the representative agent was to eliminate any reasons for a Lucas critique.[7] Blinder judged:"The important thing is to make sure our models are congruent with the facts. Lucasians, it seems to me, reverse the sequence. They want to begin with fully articulated, tractable models and worry later about realism and descriptive accuracy. (…) The issue is how religiously we must adhere to frictionless neo-classical optimising principles until that glorious day arrives" (1987, 135). For reasons

[4] See also Blinder (1997) and Tobin (1983, p. 512).
[5] October 1935, reprinted in C.W., XXI, pp. 360-369.
[6] Kirman (1992).
[7] For further discussion, see Blinder (1987), Hoover (1997), Muchlinski (1999a).

outlined in this section a compatibility of the "state-contingent rule" with Keynes´ thinking on monetary policy or international monetary relations cannot be justified.

Within a monetarist framework, the "k-percent-rule" represents the presumptions of monetarist and neo-classical theory, including the paradigm of NCM. A rule, then is defined for the sake of simplicity and formal precision. One certain conclusion of the arguments outlined in this part is that the definition both of a rule and the dichotomy "rules vs. discretion" depend on the paradigm. What needed to be discussed is how this simplicity fits with perceived economic problems (Duménil/Lévy 1997)? One crucial point is, although the nature of rules in models is a particular description, rules itself are interpreted as normative guidelines, i.e. they are "taken for granted". Moreover, they are taken as universal rules or "universal laws". As Keynes said, "taken (it) for granted" all the rest follows.

Economics is neither guided by rigidly constructed terms nor by universal law. On the contrary, terms and laws need to be related to economic questions. Economic events and decision are not driven by universal power or hidden mechanisms, but by economic agents. Surprisingly or not, the community of science has not been successful in defining the term *rule*; no one has ever written down a satisfactory rule until now (Issing 1996).

IV. Keynes' Economic Theory – A Brief Reconsideration

This part deals with examples of Keynes' contribution on monetary policy and international monetary relations. Why is Keynes´ view of relevance? There is no "Keynes-rule" to be discovered like the "Taylor-rule" or the "k-percent-rule". One reason is that he recognized monetary policy not as a subject of long-lasting planned rules, rather than committed to a discretionary manner. Since Kenyes had developed his view on monetary policy and central banks in his previous works this part does not deal with *The General Theory of Employment Interest and Money* (1936).[8]

1. Monetary Policy and International Monetary Policy

The need to face each policy decision anew and to response without formal constraints can be seen as constitutive to central banking. Focussing on explicit rules is one hypothetical way, the other practical way is on aiming to better understand the implication of rules. The problem of acting strongly to markets is especially due to the non-synchronization of time. Whereas the central banks action is realised in a particular time, the responses by market participants

[8] see Dimand (1988). In the GT we can reread his critique on the quantity theory.

are realized with different time-lags. This non-synchronization of time characteristically concerns the term structure of interest rates in different markets.[9] In Keynes´ view the formation of the term structure of interest rates is due to "past experience and present expectations of *future* monetary policy, (which) is considered unsafe by representative opinion" (1936, p. 203). His emphasis on the lack of confidence and uncertainty is beyond the model of rational expectations hypothesis, since his concepts express the precariousness and fragility of knowledge.[10] Therefore rigid or robotic rules, independent of the contemporaneous economic perceived situation are not adequate for monetary policy.

Keynes pointed out to discretion rather than rigid rules: "but we must retain an ultimate discretion to do whatever is required to relieve either a sudden and severe or a gradual and continuing strain, without laying ourselves open to any kind of reproach. With good faith and genuine collaboration between central banks rigidly fixed parities are not necessary for international trade; without such conditions they are not only dangerous, but entirely unreliable. We shall get better collaboration if we do not put too great a strain upon it and allow to the collaborators an ultimate individual discretion" (Keynes, C.W., XXI, p. 368).

Given this statement, one have to ask, why, Keynes, then, refers to gold standard (see, C.W., XXI, p. 368) as the foundation of international monetary relations?[11] In his paper, "The *International Note Issue and the Gold Standard*", Keynes argued against external restrictions and in favor for discretion. At the same time he voted for defining each currency in relation to gold as "qualified return to the gold standard" (C.W., IX, p. 362). Is this a contradiction? Does this imply the implementation of a rigidly fixed international monetary system? Certainly not! Anticipating the objection Keynes wrote: "It may seem odd that I, who have lately described gold as 'a barbarous relic', should be discovered as an advocate of such a policy, at a time when the orthodox authorities of this country are laying down conditions for our return to gold which they must know to be impossible of fulfilment. It may be that, never having loved gold, I am not so subject to disillusion. But, mainly, it is because I believe that gold has received such a gruelling that conditions might now be laid down for its future management, which would not have been acceptable otherwise" (C.W., IX, p. 362).

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[9] Blinder discusses the determination of different time structure of interest rates (1998); similarily Keynes described monetary policy (1936, p. 203).
[10] See also Blinder (1998, p. 25).
[11] We find more textual evidence given in:"*The Means to Prosperity*" (1933, pp. 360), reprinted in C.W., IX, pp. 335-366.

The return to gold standard was a pragmatic solution, not the acceptance of the "rules of the game" (C.W. XXI, 361). Again, we find textual evidence for this hesitance to define each currency in relation to gold as rigid rules. This is because "an unchangeable parity would be unwise until we know much more about the future course of international prices (…) " (C.W. IX, p. 362).[12]

In "A Tract on Monetary Reform" (1924) he had already explained that neither rigid rules nor faith in a stability of any metallic standard are reasonable methods to succeed. Interpreting his view I would like to add, pure theory is no way to get clarity if its premise are not linked to contemporary world. Pure theory which is constructed for the sake of simplicity or formal aestheticism is a blind concept. "The non-metallic standards, of which we have experience, have been anything rather than scientific experiments coolly carried out" (Keynes 1924, p. 170). This argument is of great importance. The alleged non-active rule of metallic standard "was becoming precarious by reason of its artificiality" – a long time before the war (1924, p. 171). The "rules of the game" were a construction, Keynes had already analysed in his book "*Indian Currency and Finance*" (1913).

Keynes countered that the problems of the post-war period – which of course were both a problem of adequate terms and concepts to identify and describe real economic problems – cannot be solved with a reliance on formal aestheticism.[13] He was persistently reluctant to fill the gap of cognitive solutions with illusion. The track back to the sound theory of formal brilliantly designed premises was impossible and not even desirable. He, then, stepped into the realm of terminological and economic uncertainty for the sake of clarity.

Keynes also made his objections to the orthodox theory, which states that the Bank rate and credit contraction could be instrumented in order to readjust international imbalance by reducing the level of employment and the money wages and therefore to serve for an external equilibrium. He explained:"As a result of this better understanding of its *modus operandi* , I do not believe that it will ever be used again for this purpose" (C.W. XXI, p. 368). Keynes focused on the interest rate as a means to reach internal goals. He did not speak

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[12] In chapter IV ("Alternative Aims In Monetary Policy") of "A Tract On Monetary Reform" he focused on price stability.

[13] "To suppose that there exists some smoothly functioning automatic mechanism of adjustment which preserves equilibrium if only we trust to methods of *laissez-faire* is a doctrinaire delusion which disregards the lessons of historical experience without having behind it the support of sound theory. (…). International currency *laissez-faire* was breaking down rapidly before the war. During the war it has disappeared completely" (C.W., XXV, pp. 21-22).

in favor of rigidly fixed exchange rates since any central bank should manage the rate of interest instead of sacrificing this instrument to external balance. The Bank rate should be applied for "internal condition and, in particular, the state of employment" (Keynes, C.W., XXI, p. 366). Furthermore, exchange rate movements should be stabilise in the short run within a certain target and every country is compelled to avoid strategies like competitive devaluations (C.W., XXI, p. 368).

There is no "invisible hand" which co-ordinates the countries' decisions with the result of an international equilibrium. This is also true for central bank policy in the light of modern theory: "In the modern world of paper currency and bank credit there is no escape from a "managed" currency, whether we wish it or not; convertibility into gold will not alter the fact that the value of gold itself depends on the policy of the Central Banks" (1924, p. 170). "It would have been absurd to regulate the bank rate by reference to a "proportion" which had lost all it significance" (…) "The bank rate is now employed, however incompletely and experimentally, to regulate the expansion and deflation of credit in the interests of business stability and the steadiness of prices" (Keynes 1924, p. 172). One could be inclined to argue his plans were not only beyond rigid rules, but also beyond the *trade off* of rules versus discretion, because he did not explain his theory within such a dichotomy or dual terms.

2. Shaping International Monetary Relations

I would like to turn closer to Keynes' s view on *shaping the international monetary* relations which was fundamentally based on a multilateral system.[14] Keynes had changed his view on international mechanism of methods of adjustments several times, but one dominant proposition can be manifested: He did not express a faith in flexible exchange rates as a method of market clearing process.

According to the international monetary relations he proposed rules of adjustments always giving attention to the contemporary situation of the country. This does not include a strategy of competitive devaluation of any individual country's preference.[15]

Moggridge (1986) sketched in his pioneering work, that Keynes had rejected rigid rules of the White Plan because "such a surrender of sovereignty and such rigidity were

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[14] Textual evidence is given in his drafts for an "International Clearing Unioni" (I.C.U.) repr. in Horsefield (1969), also in C.W. XXV, pp. 21-33; for details, see Dostaler (1994), Moggridge (1986, 1992), Moggridge/Howson (1974).

[15] See his opinion to past strategies of the UK in *Means To Prosperity*, 1933 (C.W., IX, p. 352).

unacceptable to the British, who had pushed Keynes's own scheme in the direction of greater discretion, and in the attempts at synthesis, which took the Stabilisation Fund as the basis for drafting, the matter of national initiative in initial exchange rate setting was central" (Moggridge 1986, p. 68). I think Moggridge' argument sheds light on what is important, whereas Boughton argued from a different point of view. Boughton (2002) wrote that Keynes lost all battles against White because he wanted to defend the Empire and resisted multilateralism.

In my interpretation, a proposal which would have roughly injured the British interests or any other country' s interest could not have been the foundation for adapting any international agreement. The different drafts on "The Origin of the Clearing Union" provides textual evidence on how Keynes tried to develop his plan of multilateralilsm. To be brief on this: "A country is in credit or debit with the Currency Union as a whole. This means that the overdraft facilities, whilst a relief to some, ar not a real burden to others. (…) " (C.W., XXV, pp. 74-75). He gave examples why bilateral arrangements are to be judged with scepticism. One main objection to bilateral arrangements was that these are dependent on partial political reasons and could cause or worsen divergences between countries.[16] Keynes' objections to the plan is based on an international "general agreement and not on a multiplicity of bilateral arrangements" (Horsefield, 1969, p. 21). Neither the creditor nor the debtor country should be able to remain passive according to their balance of payment – this is the *hard core* of his multilateralism. Keynes' s proposal for discretionary methods of adjustments are discussed in his drafts on the I.C.U. with clarity about its multilateralism.[17] Nevertheless, any abandonment of national discretion was not acceptable from the British view point. Let me conclude: The I.C.U. was conceptualised as a method for dealing with international problems rather than avoiding them. Therefore Keynes linked his ideas, concepts and categories to the empirical world. I then, would argue, that Keynes judged the economic condition of the post-war as a whole, in which Britain would play an important part for certain.[18]

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[16] See his drafts on the I.C.U. (1941-1943) and the role of the Bancor mechanism repr. in Horsefield (1969, Vol. III, p. 27) in which Keynes emphasized international responsibility; see also Keynes (C.W., XXV, pp. 77-76)

[17] "Proposal for an International Clearing Union" (April 1943) collected by Horsefield (1969, Vols. I-III), reprinted in C.W., XXV; The synthesis of C.U. and S.F. and Keynes objections are reprinted in C.W., XXV., pp. 308-314.

[18] See C.W., XXV, 77. This is the reason why Keynes defined the Bancor to gold, because he did not want to see the finance of the world economy depended on the U.S. economy and U.S. currency.

The adjustment mechanism Keynes had explained was beyond the *laissez faire method*. Moreover is was beyond the dichotomy of "rules versus discretion" because he attracted attention to the contemporary situation as a whole in which each country will possesses a temporary position. A change of an individual's position will also change the outcome of the whole, but not in an additive manner, because the whole is not simply the sum of its parts.[19] If one takes the whole as something temporarily composed and therefore a changeable whole the investigation of its composition requires distinct methods and means of analysis due to its organic interrelations.

In brief, we have looked at some textual evidence of Keynes' work. The next point I would like to make is to introduce some methodological principles. Turning to these issues in the next part provides a theoretical framework for my arguments outlined in part 2 to part 4.

V. On Ontological Realism, Empiricism, and Constructivism

For Keynes the need of shaping international monetary relations was in fact a problem of developing new means and methods of thinking. It required new categories and terms which were beyond the faith in illusionary concepts or rigidly designed propositions, certainty and complete knowledge (Muchlinski 1999b). It was Keynes's demand to leave these elements of a cognitive straight-jacket in the past – which was indeed constructed and determined by the orthodox theory - and to introduce modern methods of economic thinking. This is the reason why some of his early manuscripts and the "*Treatise on Probability*" are of great importance to understand the *turn of catergories* he implemented.

In this part I briefly describes some basis principle of ontological realism, empiricism and constructivism for the sake of clarity. Corresponding to the historical lines of the philosophy of science and methodology, one can sketch some historical epochs (Chalmers 1999). In a broader sense, realist principles have been already applied to economic theory (Baert 1996). Contrary to idealism, realism includes an acceptance of an outside or ontological given world. What, then is ontological Realism? As Craig (1998) explains: "A theory is ontologically committed to a given object only if that object is common to all of the ontologies fulfilling the theory". Ontology assumes that objects exist independently of one´s perception or recognition. An ontological view maintains that A´s exist independently of how one thinks or feels about them. More generally: A property or principle is ontological if it is a part of the very substance (itself). Therefore, the property or principle is inherent to the object.

[19] We find textual evidence in "Ethics in Relation to Conduct" (1904), see Muchlinski (1996).

Without this property or principle, the objects' existence would not be conceivable. Kant as well as New-Kantian or Positivists were opposed to ontology.

The question is, if ontological realism have any relevance for economic science. I would rise some skepticism because economic structures and "objects" are not independently of one´e perception or recognition. According to Keynes´s work I propose to interpret that his view is not based on ontological realism.

In brief: Empiricism focused on the correspondence between truth and reality and identified sense data or intuition as a certain source of knowledge. Two basic hypotheses are to be mentioned: One maintains that there is no role for *a priori* principles. The second hypothesis states that any proposition about facts or events basically roots in experience. This proposition is either a description of experience or possesses a logical relation to this empirical description based on an inductive conclusion. Hume´s view that experience is the accumulation of subjective experience caused the problem of justifying objective knowledge.[20]

This was the starting point for Kant's epistemology, a transcendental perspective. Knowledge is a result of an interaction of intuition and concept. In all of this, uncertainty still remains since intuition is just a prerequisite of knowledge, not a final point in justifying knowledge. An important conclusion of the Kantian philosophy is a different understanding of experience. Scientific methods do incorporate a non-observable systematic order independently of its supposed empiricist real order. That is to say, that any observation is to be seen as impregnated by theories. Consequently, the dualism of observation and theory broke down. The transcendental philosophy, say Kant's philosophy, works out the superior function of theory and *a priori principle*. Nevertheless all theories must lead back to experience, otherwise they would be called "empty" or blind concepts. This transcendental approach emphasises experience without neglecting its limitations (Parsons 1992). The quintessence of it all is that any object is *given by perception*. It excludes the possibility of identifying the perceived object with this object itself, since there is no such correspondence. At this point, for Kant, language is not only a medium of communication, but also a constituent element of knowledge. Wittgenstein picked up on these ideas more precisely.

Is there any link to Keynes work? His economic theory does not build upon empiricism. Keynes' theory of knowledge implies uncertainty and the unsurmountable

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[20] For a discussion on Hume's view: Keynes (1921); for a discussion of how Keynes was concerned with Kant, Fitzgibbons (1988), Muchlinski (1998).

fragility of knowledge. He objected to Empiricism in *The Treatise on Probability*. Moreover, he explained probability from an epistemological point of view. A probabilistic proposition represents both the perceived fact or event by an individual and *a apriori principle*. Let us turn briefly back to Kant´s philosophy: "We are in possession of certain modes of a priori knowledge. (…) In what follow therefore, we shall understand by a priori knowledge, not knowledge independent of all experience. (…) Thus we would say of a man who undermined the foundations of his house, that he might have known a priori that it would fall, that is, that he need not have waited for the experience of its actual falling" (*Critique of Pure Reason (CPR), B 3*). Kant emphasised: "though all our knowledge begins with experience, it does not follow that it all arises out of experience" (CPR, B1). Analogous to Kant, Keynes pointed out the limits of experience as a guide to decision, because "experience can tell us what happened, but not what will happen" (1936). This provided Keynes´criticism addressed to the British empirical school: "If our experience and our knowledge were complete, we should be beyond the need of the calculus of probability. And where our experience is incomplete, we cannot hope to derive from it judgements of probability without the aid either of intuition or of some further a priori principle. Experience, as opposed to intuition, cannot possibly afford us a criterion by which to judge whether on given evidence the probabilities of two propositions are or are not equal" (1921, p. 94).[21]

The next point I would like to make deals with constructivism. Without going into greater details on the origins and developments of constructivism, constructivists maintain that scientific knowledge is a result of scientific work in progress or thinking. Facts are not revealed to scientists, but are constructed by them. Scientific knowledge therefore is socially constituted. Of course there are different interpretations among and about constructivists. Whatever the difference may be, one particular feature of constructivism can be identified: Science does not discover a determinate structure of reality. According to this interpretation, two possible conclusions can be made: One leads to the idea that any scientific process has to deal with social constructions for the sake of an understanding. The second interpretation is basically more pessimistic because it states that neither social facts nor the society can better be understood than the natural world. In its strong version constructivism does not refer to a contemporary world since it follows the view of mind constructed reality. As a mind

[21] There is no systematic connection between "truth" and probability of a proposition. "It has been pointed out already that no knowledge of probabilites, less in degree than certainty, helps us to know what conclusions are true, and that there is no direct relation between the truth of a proposition and its probability" (1921, p. 356); see Carabelli (1988), Davis (1994).

construction reality is nothing more than a notion or in the meaning of Kant, an empty concept.

Contrary to that version *constructivism in a modified version* refers to truth as an important criteria.[22] The discovery of truth, facts and events are bound by social constructions. Finally truth is socially constructed. According to this view, problems in economics are due to problems of interpretation, perceptions, and their acceptance by the *community of science.* What follows from this? The consequences are the refutation of the positivist view of science and the idea of a homogeneous truth. Therefore assumptions and concepts in economic theories, i.e., liquidity preference or axiom of scarcity, the category of doubt and uncertainty, should be discussed within the social circumstances in which they have been established and not as ontologically given reality.

In brief we have considered features of ontological realism, empiricism, transcendental philosophy and constructivism. I am now turning to Keynes´s economic theory in order to examine why it is beyond these views.

VI. A Closer Look to Keynes' s Economic Theory from a Methodological Point of View

Keynes's epistemology provided the basis for his criticism of orthodoxy and modelbuilding in economics. He transformed orthodox categories such as rigor and complete knowledge into uncertainty and ignorance, expectations, state of confidence, degree of belief, etc. He characterised knowledge in *The General Theory as* "vague and scanty" (1936, p. 148). His theory is neither rooted in constructivism, nor ontological realism, nor empiricism, but in the transcendental view. Consequently, experience can explain to us what happened, but it cannot reveal to us what will happen. Scientific methods imply a non-observable systematic order which is not linked to a supposed real order, because of the importance of a priori principle. Therefore, any object is given by perception.

For Keynes, it is important to relate concepts or categories to the empirical world. This approach excludes that he was dedicated to realism in the meaning of ontological realism. Evidence for my hypothesis is provided by Keynes´s work on the international monetary system. Monetary coordination should avoid a *fallacy of composition*. It relied on the very idea of individuals—or countries—must take responsibility for their own benefits regarding the consequences as a whole. Keynes explained the *fallacy of composition* that an individual´s

[22] Samuels provided a critical assessment of it (1996).

rationality does not necessarily imply a rationality of the whole—i.e. the entire economy or the global market—because the latter is not simply an addition of its parts.[23]

1. Against Rigidly Fixed Rules As Dry Bones

As I have already outlined in part IV, in Keynes view on rigid or robotic rules, independent of the contemporaneous economic are not adequate for monetary policy and international monetary relations. Where are the roots of his view? There are to be found in his objection to the explicit and implicit premises of the classical theory (GT, xxi, 33, pp. 192, 371; C.W. XIII, p. 488).[24] His instrument of thought he regarded as crucial in criticizing classical theory, was logic, but not bivalent logic.[25] He did not criticize the empirical unacceptability of its conclusions or a logical inconsistency between premises and conclusion, but rather the implication of orthodox premises. As Keynes stated:"Granted this, all the rest follows" (GT, 1936, p. 21). He wrote in *The General Theory* that the superstructure of classical theory was constructed in a careful way in order to achieve "logical consistency" (1936, xxi). Keynes defined classical logic (i.e., Aristotelan logic) as *dry bones*. Therefore, he characterized the premises of (neo)classical economic theory as *dry bones*.[26] This characterization is also fundamental for his objections to rigidly fixed rules designed for the sake of simplicity or formal aestheticism.[27] Keynes objected to the (neo)classical assumptions because of its alleged universality in space and time. In his view an important criteria in determining a model's validity is its link to the *"contemporary world"*, that is, the *perceived world* (Keynes, C.W., XIV, p. 296). Therefore the (neo)classical theory is to be rejected

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[23] "Ethics in Relation to conduct" (1904), "Egoism" (1906); Muchlinski (1996).
[24] See also Carabelli (1991)
[25] Classical logic refers to Aristotelan logic or bivalent logic, like "a or non-a". Keynes judged on basis of "fuzzy logic", which implies the abandonment of dualist concepts. One important principle of fuzzy logic is "multivalence", which implies the understanding of "a and non-a" (Kosko 1993).
[26] In chapter 2 of the GT Keynes outlined the implicit assumptions underlying the classical theory of employment, which all led back to a single central one: the implicit assumption of independence from the level of output and employment (1936, pp. 21-2; GT, xxxii-xxxiii, 18; C.W. XIII p. 278).
[27] I would like to refer to the contribution by Duménil and Lévy, "should economics be hard science?" (1997, pp. 276) They introduce four arguments against formal aestheticism in economic theory. They emphazise that the formalist approach to economic theory is only *one* possible method or language; "but this role is non-exclusive. The notion of a multiplicity of language in economics refers to a plurality of approaches" (ibid, p. 276).

because of its missing link to the contemporary world and its bivalent logic. In this meaning, he rejected constructivism.

2. No Trivial Term: The Situational Context Or The *Corpus of Knowledge*

As I have already discussed in part 4, in Keynes´s view pure theory is no way to get clarity if its premise are not linked to contemporary world. Pure theory which is constructed for the sake of simplicity or rigidity or formal aestheticism is a blind concept (see part 6.).
The philosophical roots of Keynes´s view lead back to his *theory of probability*, which is of course a theory of knowledge (1921, p. 19). In *A Treatise on Probability* (1921) he sketched the metaphor *corpus of knowledge* to explain why acquiring knowledge does not lead to certainty since the fragility of knowledge still remains (1921, p. 4). He made the turning point in his position even more transparent, i.e., he left Aristotelian logic behind him: "As soon as we have passed from the logic of implication and the categories of truth and falsehood to the logic of probability and the categories of knowledge, ignorance, and rational belief, we are paying attention to a new logical relation in which, although it is logical, we were not previously interested, and which cannot be explained or defined in terms of our previous notion" (1921, p. 8). This statement is important from a the viewpoint of the History of Economic Thought. This transformation of notions documented the distance from the British Empirical School as well as from ontological realism.

He referred to *ignorance* in *A Treatise on Probability* (1921, p. 356). He described probability as a logical relationship between two propositions: premise and conclusion (1921, p. 11). Not only two propositions, but the acquaintance with them by an individual allows one to speak of probability (1921, p. 19). To say something upon a probability-relation implies receiving a representation of it, rather than the thing as it is supposed to be ontologically. Therefore the significance of probability depends on individual judgement in order to perceive the relation between propositions with a "rational degree of belief". This is the reason why Keynes focused on the significance of probability and induction. Induction is an element of outlining what probability means. The theory of probability refers to the method and implication of induction, whereas the method of deduction is inferior for the purpose in question (see chap. 10). In contrast to deduction, induction bears no possibility to use the Aristotelean logical conception called *bivalent logic*. As I have already mentioned, logic is part of Keynes's *theory of knowledge*, and lies beyond the classical conception of logic. He explained: "The validity and reasonable nature of inductive generalisation is, therefore, a *question of logic* and not of experience, of formal and not of material laws. The actual constitution of the phenomenal universe determines the character of our evidence; but it cannot determine what conclusions *given* evidence *rationally* supports" (1921, p. 246). The citation above shows in brief the theory of probability as a theory of knowledge, which is paradigmatically also found in his economic theory, for instance, state of confidence, liquidity-premium, expectation and conventional judgement. An inductive argument affirms, not that a certain matter of fact *is* so, but that *relative to certain evidence* there is a probability in its favour" (1921, p. 245).[28] His position can be described as a *realistic approach* insofar as one accepts a world outside of the individual. The realist approach should not be confused with the so called "critical" realism.[29] In Keynes's view, one find also rationalist elements (O' Donnell 1989). He was opposed to idealism, i.e., he rejected empty concepts, and empiricism, i.e., he emphasized the limits of experience and of the British Empirical School (Muchlinski 2002).

3. Transformation of Categories - Or the Roots of *Uncertainty* and *Ignorance*

The transformation of categories as outlined in the previous paragraph provides the methodological foundation that there is no sound theory of formal brilliantly designed and rigid premises to be found in his work. Keynes, then, stepped into the realm of terminological and economic uncertainty for the sake of clarity. For example, the "rules of the game" were a construction, he had already analysed in his book "*Indian Currency and Finance*" (1913). Uncertainty in Keynes' s thinking is inevitably inherent concerning both present or prospective decisions, actions and choices. This is why all plans or draft are to be interpreted as a chance to succeed or to fail.

In contrast the criteria in classical theory are universality and rigor as the basis for certain knowledge, deduction and formal aestheticism.[30] (Neo) Classical theory seeks to reduce uncertainty to the same epistemological status as certainty by using mathematical calculus (C.W., XIV, 1937, p. 213).[31] According to Keynes's argument, economy as a system contains aspects of irreversibility created by interactions amongst different people who are involved in pursuing their economic goals. He relied on conceptions of degree of credibility,

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[28] See Bateman on induction in Keynes´thinking (1991).
[29] Further investigation on "critical realism" is given by Baert (1996), Parsons (1992).
[30] Freedman:"False rigor only provides the semblance of understanding (1995, p. 81).
[31] Hillard argued, Cartesian reductionism in classical theory was of no relevance to Keynes's thinking (1992, p. 66).

degree of confidence, degree of rational belief, etc. In summary, Keynes economic theory goes beyond constructivism, ontological realism and empiricism since he defined economic theory as a social science based.

VII. Concluding Thoughts

Keynes tried to balance his ideas for the new international monetary system with the contemporary and perceived situation. The debates on international monetary arrangement, to which Keynes´ lent his influential voice, documented that his theoretical view is beyond constructivism, ontological realism and empiricism. This approach leaves behind the idea of a domestic economy that is constrained by economic interdependencies.

Keynes thereby revolutionised economic theory by integrating the categories of knowledge, ignorance, rational degree and precariousness. He abandoned constructivism because he rejected empty concepts as *dry bones*. He also left empiricism and ontological realism behind him since he needed to discuss his new categories as *a priori* principles. His view of economic theory encompasses fragility and precariousness of knowledge since he had already rejected Benthamine calculation. He viewed bivalent logic as inadequate for his purpose to find solutions to economic problems.

Keynes's economic theory is not compatible with principles of constructivism, empiricism and ontological realism by referring to a key term of his economic writings, i.e., discretionary decision. Talking about monetary policy as constructed by a false dichotomy, i.e., "rules versus discretion", pretending credibility seems to be a contradiction. The effectiveness of monetary policy is not a result of a continuity of fooling the public about the goals, strategies, and forecasts made by central banks (Blinder 1998). One result of my contribution is that the famous dichotomy "rules versus discretion" is of no relevance to his economic theory, because he had used the term "rules" not in the meaning of a formal brilliantly designed notion. He definitely made a distinction between non-rigidly-fixed-rules and discretion.

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