Keynes and Schumpeter

United in dissent – divided in destination

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ABSTRACT:

The paper discusses the relationship between the works of John Maynard Keynes and Joseph Alois Schumpeter, two scholars who dissented in important respects from the mainstream. After a brief discussion of the "visions" of the two authors as regards the working of the capitalist economy we summarize what the two wrote about each other. We then turn to the heretic elements in their analyses and show that, important differences notwithstanding, they had much more in common than is commonly acknowledged. Their criticisms of economic orthodoxy exhibit several similarities, especially the rejection of the dichotomy of the monetary and real spheres of the economy, the proposition that investors are the devoted servants of consumers and savers, and the doctrine that the rate of interest equilibrates investment and saving. If we consider the heretical elements in the theories of Schumpeter and Keynes, the question is close at hand, what prompted both authors to stick to orthodox theory in its Walrasian and Marshallian variants. However, it would be expecting too much from a scientific innovator to anticipate the impact of his innovation on the further development of his discipline, as it would be too much to expect from an entrepreneur to anticipate the impact of his innovation on the market, which he is about to revolutionize.

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1. Introduction

According to a widespread view the theories of Joseph Alois Schumpeter and John Maynard Keynes are incompatible with one another. Schumpeter has played his part in generating this impression. In this paper I ask, to what extent this impression is correct and in which regard it is misleading. Do the two authors share some common views, do some of their views complement each other in a fruitful way, and which of their views collide?

The composition of the paper is the following. Section 2 deals briefly with the social "visions" of Schumpeter and Keynes. Section 3 summarizes what the two authors wrote about each other. Section 4 turns to the heretic elements in their analyses, in which regards they part company with the mainstream of their time and seek their own ways, and whether these ways overlap or drift apart. Section 5 contains concluding observations.

2. Social "visions" of Schumpeter and Keynes

Schumpeter speaks of the "vision" or "ideology" of an author with respect to his or her pre-analytical perspective on a subject. It orients and shapes his or her thinking. The view that an author is able to approach a topic without such a vision or ideology is naïve. One's preconception defines the starting point from which one begins the investigation of a problem.[1] In the course of it the preconception may either be corroborated and refined or questioned and abandoned. We encounter both possibilities in the history of science – cases, in which the preconception was not fundamentally challenged or even left behind, but ever more deeply substantiated and rooted, and cases, in which at a certain point the original perspective was fundamentally changed or even rejected. Both in the case of Schumpeter and Keynes it can be said that their understandings of the functioning of capitalism is characterised by a remarkable continuity from the beginning until the end of their academic careers, certain turning points in regard to particular aspects of the problem at hand notwithstanding. One is in vain on the lookout for radical breaks with their original visions, which they assumed at relatively early times of their lives. They by and large stick to their early views and their works reinforce and solidify them.

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[1] On the concept of "vision" in Schumpeter and its illustration with regard to Keynes, see Schumpeter (1954: 41-2). Keynes's vision is said to have been informed by the "special characteristics … of England's aging capitalism" (1954: 42). And later in the book the reference is to "the arteriosclerotic economy whose opportunities for rejuvenating venture decline while the old habits of saving formed in times of plentiful opportunity persist" (1954: 1171).

If we turn to the content of these visions of the two authors and the theoretical penetration of of the subject matter that springs from them – the working of the capitalist economy – we encounter a surprising similarity in the fundamentals. Neither of the two authors is a critic of capitalism as such, but defends it. Both consider themselves to be liberals. Both are adversaries of the command economy and of Soviet-style socialism. Both praise the achievements of capitalism, which has brought an immense increase in material wellbeing. Both see, however, that material betterment is not ipso facto the same as the "good life" with spiritual and moral development of the individual and the formation of a peaceful and just society. Both are also convinced that in the course of time capitalism will undergo from within, endogenously, a deep change and will be in danger of being replaced by another, more collectivist form of society. Both agree that it is paradoxically the success of capitalism that contains the seeds of its self-transformation. They thus stand in the tradition of the Scottish Enlightenment with David Hume, Adam Ferguson and Adam Smith as important advocates of the doctrine of the non-intended consequences of human action.

There are important differences next to these similarities. Which relative weight is to be attached to each of them is assessed in the following. First we turn to a confrontation of salient features of the economic system as seen by the two authors.

Schumpeter

Schumpeter is fascinated by Léon Walras' theory of general economic equilibrium. In his habilitation thesis he credits it with having brought to light "a small group of established truths" and calls it "a guiding light in a sea of darkness" (Schumpeter 1908: 626).[2] Notwithstanding all the praise he lavishes upon Walras, Schumpeter insists that in a most important respect the Lausanne economist's theory is incomplete and badly in need of amendment. The serious deficit of Walras' theory consists in the following: "Up until now only the statics has been elaborated fairly satisfactorily. … The dynamics is still in its infancy, is a 'land of the future'." (1908: 183) This land Schumpeter is desirous to gauge, thereby opening up the hitherto un-researched and much larger set of truths. Since according to Schumpeter capitalism is an economic system that, by its very nature, is restless, dynamics is the real challenge to the theorist (see Kurz and Sturn 2012: 100 ff). The statics provides at best the starting point from which probing steps into dynamics can be made. However, as soon as one does so one leaves secure ground. Economic development and economic

[2] All translations from German for which no English version exists are mine.

equilibrium, Schumpeter emphasizes time and again, are mutually exclusive. The "small group of established truths" is thus of little use in investigating the as yet unchartered territory. If Schumpeter in the *Theory of Economic Development* nevertheless retreats to the know territory of the "circular flow", he does so not because he sees in it an empirically important case, but in order not to lose grip and ground in the whirlpool of the new. Schumpeter insists that each process of "creative destruction" triggered by an innovation is possessed of an attractor – a centre of gravitation in the words of the classical economists –, a new circular flow towards which the system gropes in the course of the absorption of the novelty. At the same time he stresses that new innovations continually upset the system so that none these stationary states will ever be reached. The system is incessantly in movement, in a state of unrest, where the centrifugal force of innovations compels the system of leave the beaten tracks, while the centripetal force of competition moulds for it new ones.

Schumpeter applies *the* grand theme of the Scottish Enlightenment – the unintended consequences of human action – to a particularly important case: the causes, mechanisms and effects of innovating activity. In this he variously parts company with the mainstream of his time (from which today's mainstream does not differ much). He rejects the latter's typical actor, the *homo economicus*, concerned with using the alternatives of action open to him as best as he can by optimally adjusting to given conditions. In this view the agent is "rational" in the sense of optimising his expected utility, given constraints; he is "hedonistic", but largely passive. It is a serious error to believe that this actor decides about the course of events, Schumpeter objects. This actor is a follower, not a leader. The other one is "energetic", "active" and "dynamic" and no "boring equilibrium man" – the entrepreneur.

Schumpeter conceives of business cycles and long waves of economic development not as an expression of the malfunctioning of the capitalist economy, but on the contrary as an expression of its "law of motion", a concept he borrows from Marx. He is thus also not of the opinion that economic policy can make cycles and waves disappear without at the same time abolishing the innovation dynamics that is a characteristic feature of capitalism. This does not mean that Schumpeter advocates strict abstinence as regards stabilization and regulatory policy. On the one hand he is convinced that the financial sector is inherently unstable and tends to deepen and prolong recessions. He therefore opts for its regulation and discusses ways of financing innovations other then credit financing, including venture capital (see Peneder and Resch 2015). Even forms of financing which appear to be incompatible with the private organisation of the financial system he considers to be worth discussing and

emphasizes that in this way the core process of economic development will not lose any of its "essential features".

On the other hand, in his discussion of the so-called problem of "technological unemployment", Schumpeter (1912: 504 ff) emphasizes that whether a stabilization policy is necessary cannot be decided independently of the type and magnitude of technological and organizational progress. In the case of a quick succession of strongly labour saving forms of technical progress the employment effects are different from those in the case of other forms and patterns of penetration. It can also not be ruled out, Schumpeter insists in several contributions to *Der Deutsche Volkswirt* (The German Economist), edited by his friend Gustav Stolper, that a number of factors cooperate, including monopolisation and rigid prices, and involve serious threats to the legitimacy of the capitalist mode of production. In this case judicious economic policy is badly needed (see Kurz 2015b: part 7). However, in the ordinary state of affairs, Schumpeter opines, this is not so and only moderate monetary and fiscal policy measures are appropriate, if any at all. In general one can count upon the self-regulating forces of the economy.

In the *History of Economic Analysis* Schumpeter argues that while "it is possible to feel unconvinced by Keynes's and [Alvin H.] Hansen's arguments" as regards stagnationist tendencies of mature capitalist economies, one may nevertheless "predict that capitalist evolution tends to peter out – i.e. to settle down into a condition that might be just as well described as 'stagnation'." The reason he gives is that "the modern state may crush or paralyze [capitalism's] motive forces" (1954: 1173 fn. 8), especially by high taxes on profits. While this is frequently considered an exogenous factor that has nothing to do with the law of motion of the economy, Schumpeter insists that capitalism and the state co-evolve and that inhibitions of the kind mentioned can "be shown to be *the inevitable outcome of capitalist history*". He concludes that, "evidently, it comes to the same thing, in a profit economy, whether the objective opportunities for gainful enterprise decrease [as Keynes and Hansen argue] or the profits after having been made are taxed away" (1954: 1173 fn. 8; emphasis added). Hence, Schumpeter, too, sees endogenous stagnationist tendencies at work, but traces them back to the transformation of society at large and especially of the state – its goals, means and need for legitimacy in an environment that is continuously in travail.

Keynes

Although Keynes appears to be much less fascinated by Alfred Marshall's theory than Schumpeter is by Walras's, the impact of the former on him is significant. And very much like Schumpeter with regard to Walras' theory he considers Marshall's to be applicable only in special situations and not in general. The two theories lack a decisive element each – Walras an investigation of economic dynamics, Marshall an investigation of effective demand. According to Schumpeter and Keynes the two theories thus apply only to the extremely special case of an economic equilibrium with fully employed productive resources. Beyond it the two theories have nothing or little to offer. In *The General Theory* we read:

> [The] outstanding features of our actual experience [are] … that we oscillate, avoiding the gravest extremes of fluctuation in employment and in prices in both directions, round an intermediate position appreciably below full employment and appreciably above the minimum employment a decline below which would endanger life. (*CW* VII: 254)

And elsewhere Keynes writes:

> The outstanding faults of the economic society in which we live are its failure to provide for full employment and its arbitrary and inequitable distribution of wealth and incomes. (*CW* VII: 372)

Capitalism, Keynes is, convinced fails both with regard to the problem of employment and the problem of the distribution of the social product. He rejects the pillars upon which marginalist or neoclassical theory – he speaks misleadingly of "classical" theory[3] – rests: Say's law according to which "the economic system was always operating to its full capacity" (*CW* VII: xxxv), the quantity theory of money (cf. Kahn 1984) and finally, albeit less clearly, marginal productivity theory. He posits that economic development comes in leaps and bounds, oscillating around a trend that exhibits smaller or lager margins of unemployment. About the causes of economic fluctuations we read in chapter 22 of *The General Theory*, "Notes on the trade cycle": "The trade cycle is best regarded ... as being occasioned by a cyclical change in the marginal efficiency of capital" (*CW* VII: 313). Cyclical fluctuations of marginal efficiency of capital Keynes traces back to a number of reasons known from the literature, viz. the overaccumulation of capital in booms and underconsumption in recessions (*CW* VII: 315 and 324), which, however, are more in the nature of phases of the cycle than its causes.

[3] Schumpeter (1954: 1178 fn. 15) testifies "to the fact that Keynes['s] knowledge of economic literature … was not of the first order".

In the long run Keynes sees a tendency towards stagnation in capitalist economies. His analysis, he writes, "supplies us with an explanation of the paradox of poverty in the midst of plenty" (*CW* VII: 39).[4] This tendency he traces back to an aggravation of the problem of a sufficient aggregate effective demand and gives the following reaons: First, according to his "fundamental psychological law" the propensity to save can be expected to increase as incomes increase; this, however, increases the potential of deficiencies in demand. Second, in the course of the accumulation of capital the relative "scarcity" of capital will decrease (*CW* VII: 375-77). This reduces the opportunity of profitable investments, reflected in a falling marginal efficiency of capital.[5] Third, Keynes reckons with a high liquidity preference or "love of money" in societies that get wealthier. This prevents the rate of interest from falling enough. Thus the system is confronted with the following dilemma: The increase in the propensity to save would require either a parallel increase in the propensity to invest or a reduction in the cost of borrowing liquid funds in order to ward off the growing danger of effective demand failures. Yet according to Keynes one is to expect a declining propensity to invest and no betterment of the conditions of external financing of investment. Wealthy societies run the risk of not exploiting their productive potential because of a lack of aggregate effective demand.

How to deal with this danger? Keynes is skeptical that in view of its logic of functioning the economic system is able to cope with the problem from within, as neoclassical theory has it. Say's Law does not hold any longer in rich capitalist economies. Also monetary policy will no longer be able to accomplish the task. The public authorities will have to intervene in order to prevent capitalism from destroying itself. Keynes expounds:

> I conceive, therefore, that a somewhat comprehensive socialisation of investment will prove the only means of securing an approximation to full employment; though this need not exclude all manner of compromises and of devices by which public authority

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4 Schumpeter (1954: 1172) insists that "Keynes must be credited or debited, as the case may be, with the fatherhood of modern stagnationism", a vision first hinted at in *The Economic Consequences of the Peace* (1919), where Keynes distinguishes between an "Old" and a "New World" (see *CW* II, especially chapter 2), the old being characterized by a large propensity to save and ample opportunities for profitable investments, the new essentially only by the former.

5 This argument is borrowed from marginalist-neoclassical thinking and shows how much Keynes was the victim of "habitual modes of thought and expression". "The difficulty", he writes, "lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds" (*CW* VII: xxiii).

> will co-operate with private initiative. But beyond this no obvious case is made out for a system of State Socialism which would embrace most of the economic life of the community. (*CW* VII: 378)

He adds:

> But if our central controls succeed in establishing an aggregate volume of output corresponding to full employment as nearly as practicable, the [neo]classical theory comes into its own again from this point onwards. If we suppose the volume of output to be given, i.e. to be determined by forces outside the [neo]classical scheme of thought, then there is no objection to be raised against the [neo]classical analysis of the manner in which private self-interest will determine what in particular will be produced, in what proportions the factors of production will be combined to produce it, and how the value of the final product will be distributed between them. (*CW* VII: 378-9)

This is a remarkable passage that shows how much Keynes was convinced of the conditional validity of the neoclassical theory – more precisely: its Marshallian variant. In the preface to *The General Theory* he explicitly specifies the task of his oeuvre to consist in the elaboration of a "general theory …, which includes the received [neo]classical as a special case" (*CW* VII: xxiii). An economic policy that engenders the full utilization of all productive resources, so he thinks, was to realize the special case that helps the incriminated theory to become true. In my view this is a rather naïve belief, which rests on the postulate that Marshall's or rather Arthur Cecil Pigou's theory, with which *The General Theory* is particularly concerned, applies in conditions of full employment. We know, however, from various criticisms levelled at the theory, that this is a highly problematic presumption.[6]

3. Keynes and Schumpeter on each other

Keynes has written about Schumpeter and his work much less than the latter about him. In this section I summarize some of the most important statements of the two authors about each other.

Keynes on Schumpeter

[6] It suffices to recall Sraffa's criticism of Marshall's theory, the debates between the two Cambridges in the theory of capital and the demonstration by Mantel, Sonnenschein and Debreu that with the assumptions from which general equilibrium theory starts no proof of stability of the system can be given.

In the *Treatise on Money* (1930) Keynes mentions Schumpeter's *Theorie der wirtschaftlichen Entwicklung* (1912) four times and expresses a great deal of agreement with the Austrian economist. Since at the time when Keynes wrote the *Treatise*, the English translation (of the second, strongly shortened and revised version) of the *Theorie* was not yet available and since Keynes's knowledge of German was modest, he apparently had not read the book, but knew it only indirectly through Wesley Clair Mitchell's treatise on *Business Cycles* (see Mitchell 1927: 20-31). Keynes enters into a discussion of three areas. The first concerns the role of innovations for the course of events that unfolds in cycles. He quotes Mitchell's following summary account of Schumpeter's view:

> The innovations made from time to time by the relatively small number of exceptionally energetic business men – their practical applications of scientific discoveries and mechanical inventions, their development of new forms of industrial and commercial organisation, their introduction of unfamiliar products, their conquests of new markets, exploitation of new resources, shifting of trade routes, and the like. Changes of this sort, when made on a large scale, alter the data on which the mass of routine business men have based their plans. But when a few highly endowed individuals have achieved success, their example makes the way easier for a crowd of imitators. So, once started, a wave of innovations gains momentum. (*CW* VI: 86-7)

Keynes informs the reader that he shares this view "unreservedly".

The second area concerns the relationship between saving and investing. The *Treatise* already foreshadows Keynes's view that investment causes saving and not the other way round, a view he was to elaborate fully only in *The General Theory*. When planned investment deviates from planned saving, this, via windfall profits or losses, triggers an adjustment of the latter towards the former. Keynes remarks that his theory was anticipated, although incompletely, by several authors, including Schumpeter, and stresses: "Accordingly I find myself in strong sympathy with the school of writers – Tugan-Baranovski, Hull, Spiethoff and Schumpeter – of which Tugan-Baranovski was the first and the most original" (*CW* VI: 89). His praise for Tugan comes as a surprise, because he accuses him to have wrongly assumed that savings may be accumulated in a non-invested form during depressions and then used up in booms. More convincing, Keynes surmises, are "Schumpeter's 'innovations' in conjunction with a failure of the banking system to respond in such a way as to preserve the desired degree of stability" (*CW* VI: 90). Alas, none of the authors mentioned is said to have understood the effects of disequilibria between investment and savings on prices and of the

role of the banking system in all this. At least we encounter in the respective literature and "notably in Professor Schumpeter's work" the distinction between investments and savings as well as that between "voluntary" and "forced" saving.

The third area concerns the velocity of circulation of money. This had been defined differently in the literature. According to an older definition, proposed by David Hume and then John Stuart Mill, it concerns the relationship between quantity of money and national income, whereas according to the modern definition, advocated especially by Irving Fisher, it concerns the relationship between the quantity of money and the volume of transactions. Keynes is convinced that the former definition involves "a hybrid conception having no particular significance." Alas, we are told to encounter it again in the writings of Pigou and Schumpeter (*CW* VI: 20-21).

With regard to the three areas mentioned, Keynes agrees with Schumpeter in two, which may safely be assumed to be the more important ones. He expressly shares Schumpeter's view that innovations are responsible for economic cycles.

Schumpeter on Keynes

Treatise on Money In an exchange of letters regarding Keynes's short contribution "A monetary theory of production" to the Festschrift in honour of Arthur Spiethoff we encounter a submissive Schumpeter. On 18 October 1930 he writes to Keynes on the occasion of the publication of the *Treatise*: "I do not think that any scientific book has been looked for with so universal an impatience" (*CW* XIII: 176). He does not show any sign of disappointment that Keynes's work has rendered obsolete at a single stroke his own work on a book on monetary theory. And on 29 November of the same year he sends Keynes the following lines: "I want to congratulate you most heartily on this splendid achievement. ,,, This is truly a Ricardian *tour de force* … I believe it will ever stand out as a landmark in this field" (*CW* XIII: 20). What might easily be read as fulsome praise is not, as we shall see in a minute. There is at any rate no presumption that Keynes was aware of the sting hidden in the flattery.[7]

General Theory The situation changes dramatically when in 1936 Keynes with the

[7] In the *History of Economic Analysis* it becomes abundantly clear that what might at first sight have been considered praise in fact was a jibe. *The General Theory* is called a "feat of leadership" of "a forceful and dauntless leader of public opinion", keen "to restore intellectual respectability to anti-saving views" and propagating "equalitarian policies" and the "New Economics of Spending" (1954: 1170-1171). In this book Keynes, Schumpeter insinuates, was less of a scholar and more of a preacher.

publication of *The General Theory of Employment, Interest and Money* (*CW* VII) – "the greatest literary success of our epoch" (Schumpeter 1954: 1170) – pre-empts Schumpeter, who was working on his *Business Cycles*, once again. In the *Journal of the American Statistical Association* the latter publishes in the same year an attack on Keynes that could hardly be topped in terms of acrimony and malevolence. At the beginning of his review he speaks very favourably of Keynes and calls him "one of the most brilliant men who have ever bent their energies to economic problems" (Schumpeter 1936: 791). But to the rest of his piece the classic words with which the Vienna Opera Ball is opened – "Alles Walzer" (everybody waltz!) – does not apply. Interestingly, Schumpeter's main accusation is that *The General Theory* is "Ricardo all over again" – "Ricardian as the book is in spirit and intent, so it is in workmanship" (1936: 792).

Keynes a Ricardian? Has Schumpeter slipped? Time and again Keynes had distanced himself from Ricardo, including his biographical essay on Thomas Robert Malthus, published in 1931. In it he had called Ricardo "an abstract and *a priori* theorist", a man "with his head in the clouds" (*CW* X: 95 and 98), a characterisation he repeats in *The General Theory* (*CW* VII: 32). Keynes sighed: "If only Malthus, instead of Ricardo, had been the parent stem from which nineteenth-century economics proceeded, what a much wiser and richer place the world would be to-day!" (*CW* X: 100-101).

But soon in Schumpeter's review it becomes clear what he means. He accuses not only Ricardo, but also Keynes of the "Ricardian Vice". This refers to Ricardo's alleged habit of introducing utterly bold assumptions into an already oversimplified representation of the economy and treating as givens what in fact are unknowns, and of deriving bold policy conclusions from a shaky analytical construction.[8] Keynes is said to be a victim of the same vice as Ricardo: "everywhere he really pleads for a definite policy, and on every page the ghost of that policy looks over the shoulder of the analyst, frames his assumptions, guides his pen" (1936: 792).

This accusation Schumpeter then seeks to corroborate. His main objections to *The General Theory* are the following. (1) The concepts of aggregate demand and aggregate supply, conceived as schedules or functions (see the D and the Z curve in *CW* VII: 25-6), and the

[8] In the *History of Economic Analysis* we encounter this accusation again. Schumpeter there deplores inter alia Ricardo's alleged habit of "piling a heavy load of practical conclusions upon a tenuous groundwork" (Schumpeter 1954: 1171) and in fact calls Keynes "Ricardo's peer in the highest sense of the phrase" (1954: 1171). For a critical discussion of Schumpeter's view, see Kurz (2008, 2016a).

point of intersection, giving total employment and the value of total output, lack a solid foundation: "There is little justification for this extension of the 'Marshallian cross'" (1936: 793). (2) Keynes deals only with the "surface" of the problems at hand and does not get to the heart of them. In particular, he assumes that techniques of production remain unchanged, although it is "the outstanding feature of capitalism that … they are being incessantly revolutionized" (1936: 794). Schumpeter insists: "The capitalist process is essentially a process of change of the type which is being assumed away in this book, and all its characteristic phenomena and problems arise from the fact that it is such a process" (1936: 794).[9] *The General Theory* is said to contribute nothing to a better understanding of the inherent dynamism of the capitalist economy – it even tends to block the view of its restlessness due to innovations and creative destruction and thus of capitalism's law of motion. Recession and depression are not expressions of a systemic failure of capitalism, but of its way of functioning. (3) Instead of a deeper analysis of the phenomena under consideration Keynes has recourse to assumptions, postulates and premises that freeze some of them. In addition to the assumption of a stationary technical knowledge Schumpeter mentions the following *dei ex machina* invoked by Keynes: (a) given expectations; (b) the consumption function, Keynes's so-called "fundamental psychological law"; (c) liquidity preference; and (d) rigidities of prices, wages and other variables. The *dei* under consideration are said to populate "a whole Olympus" (1936: 795) and dominate Keynes's world. The argument is said to be incoherent, "the whole *theoretical* case … collapses, and we are *practically* left with friction, or 'stickiness'" (1936: 795). The given "proof" of an underemployment equilibrium has "no greater practical importance than a proof that motor cars cannot run in the absence of fuel" (1936: 794).

There is a single element of *The General Theory* that Schumpeter exempts from his criticism: "I wish however to welcome his purely monetary theory of interest which is, as far as I can see, the first to follow upon my own" (1936: 795) – the reference is to the determination of the rate of interest in the money or credit market by supply of and demand for liquidity and a rejection of the conventional view that via the interest rate savings and investments get

[9] In the *History of Economic Analysis* Schumpeter criticizes Keynes in addition for considering only the "expenditure effect" of new investment, but not the capacity effect (as it had been investigated by Evsey Domar and Roy F. Harrod), and thus restricting his analysis to the short period. He observes: "This limits the theory to an analysis of the factors that determine the higher or lower degree of utilization of an existing industrial apparatus." (1954: 1175)

equilibrated.[10]

Schumpeter's criticism culminates in the damning verdict: "The less said about the last book the better." This does not, however, prevent him by way of concluding to tell maliciously a new version of the story of the *Ancien régime*:

> Louis XV was a most enlightened monarch. Feeling the necessity of stimulating expenditure he secured the services of such expert spenders as Madame de Pompadour and Madame du Barry. They went to work with unsurpassable efficiency. Full employment, a maximum of resulting output, and general well-being ought to have been the consequence. It is true that instead we find misery, shame and, at the end of it all, a stream of blood. But that was a chance of coincidence. (1936: 795)

The consequences of Mr Keynes, Schumpeter insinuates, are much worse than "The Consequences or Mr Churchill".

Ten years later Schumpeter publishes a long obituary of Keynes in the *American Economic Review* (Schumpeter 1946). While slightly more moderate in tone, it is hardly less harsh and adds additional aspects to the previous attack. Initially, Schumpeter praises "the mathematical quality of mind that underlies the purely scientific part of Keynes's work" (1946: 496), but then accuses Keynes of partiality in matters of economic policy and of lacking sobriety and scientific honesty: "If the purpose seemed to justify it, he had no objection to using arguments that were as crude as those of Sir Thomas Mun" (1946: 496) – the reference is to the mercantilist author, who advocated a policy of export surpluses. Schumpeter is stunned, not least because in his opinion Keynes was a most un-political man, an assessment that comes as a surprise.

The negative judgement does not extend to all of Keynes's works. For example, Schumpeter praises inter alia *The Economic Consequences of the Peace*. A sort of Fall only happened with *The General Theory*. While this book is said to reflect well Keynes's vision of a tendency towards a secular stagnation of developed capitalist economies, it does not constitute a "natural evolution" of his thought, as Keynes maintains, but rather a significant break with

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10 Interestingly, in the *History of Economic Analysis* Schumpeter calls Keynes's monetary theory of interest "perhaps the most important original contribution" of the book (1954: 1178 fn. 16), but refrains from claiming priority in this regard.

it.[11]

Schumpeter reiterates his earlier view that *The General Theory* is based on three schedules or functions and stands or falls with them: the consumption function, the schedule of marginal efficiency of capital and the schedule of liquidity preference. Keynes seeks to "explain" unemployment in terms of them, which prompts Schumpeter to exclaim: "What a *cordon-bleu* to make such a sauce out of such scanty material!" (Schumpeter 1946: 510). Keynes uses only monetary aggregates, whose *raison d'être* he fails to explain. The analysis is macro-static, although it would have to be macro-dynamic. And yet dynamic elements, such as expectations, play a crucial role in the argument, although the way they come about or change is not investigated. All phenomena related to the building up and restructuring of the productive apparatus are fatally excluded from consideration. Schumpeter embraces John Richard Hicks' characterisation of *The General Theory* as "The Economics of Depression" and qualifies Keynes as a theorist of "secular stagnation": "*The General Theory* is the final result of a long struggle to make that vision of our age analytically operative" (1946: 501). However, according to Schumpeter there is no such thing as a secular stagnation for the reasons given by Keynes, there are only prolonged periods of depression. One can count upon the recurrence of innovative dynamics, with whose help the economic system is able pull itself out of the swamp by its own bootstraps.

As in Marx, says Schumpeter, in Keynes the collapse of capitalism is also the result of "causes inherent to the working of the capitalist machine" (1946: 512). But this result is spurious in that it follows from implicit reasoning, which is the characteristic feature of the Ricardian Vice. The presented theory is said not to be "general" at all. It follows rather from a number of ad hoc postulated rigidities. And it cannot explain capitalist reality – the analytical tools forged by Keynes are ill-suited for the task. This Schumpeter seeks to illustrate in terms of the following analogy: "A fruit knife is an excellent instrument for peeling a pear. He who uses it in order to attack a steak has only himself to blame for unsatisfactory results" (1946: 515). The "ideological bearings of the book" (1946: 515), Schumpeter contends, cannot be overlooked. Schumpeter believes to discern Keynes's intentions and is disgruntled.

Of interest are Schumpeter's remarks on Keynes's view of the role of investment and savings. According to an old tradition in economics, thriftiness is the main source of wealth. This,

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[11] In the *History of Economic Analysis* he writes that the 1936 book expresses Keynes's "fundamental idea *and nothing else*" and that the book "seems to have satisfied [Keynes] completely, so much so that he felt himself to have led economics out of 150 years of error into the land of definitive truth" (1954: 1172; emphasis in the original).

Schumpeter opines, is “the last pillar of the bourgeois argument” (1946: 516), to which even Marx fell victim. Keynes instead was intent to demolish this last pillar by insisting: “‘who tries to save destroys real capital’ and that, *via* saving, ‘the unequal distribution of income is the ultimate cause of unemployment.’ *This* is what the Keynesian revolution amounts to” (1946: 517).[12]

Since with regard to the primacy of investment over savings Schumpeter advocates a view that is similar to Keynes’s, in this passage it does not become very clear, whether and to what extent it is meant to convey a criticism of Keynes. Also Schumpeter’s following sibylline remark is not very enlightening: “As with Marx, it is possible to admire Keynes even though one may consider his social vision to be wrong and every one of his propositions to be misleading” (1946: 518). One may ask: If Keynes’s social vision was “wrong” and each of his propositions “misleading”, whereupon can one’s admiration then possibly be based? Apparently Schumpeter’s vitriolic attack on Keynes overshoots the mark, since, as we have already heard with regard to the determination of the rate of interest, there exist at least some agreements amongst the two. These put them into opposition to contemporary mainstream economics and make them heretics. To the heretical elements of their theories we now turn.

4. Two heretics – similarities and differences

Money and credit

Both economists agree that the real and the monetary sphere are intimately intertwined. Both also reject the concept of money as a veil that lies above the real economy and does not significantly affect it. In Schumpeter this view applies only to the hypothetical case of the “circular flow”, in Keynes to the case of an economy in which full employment obtains because of a successful economic policy.[13] In the two cases mentioned marginalist theory (in its Walrasian or Marshalliant variant) is taken to be valid. However, beyond those rare and

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[12] In the *History of Economic Analysis* Keynes is said to have been convinced “that saving (or, alternatively, the rate of interest) holds the role of villain of the piece that impoverishes nations” (1954: 1176).

[13] Schumpeter says so explicitly: In the hypothetical case of a stationary economy money has only the function of a unit of account and means of exchange, whereas in a developing economy it performs “an essential role” (1912: 199).

limiting cases, that is, in general, the dichotomy of monetary and real sphere (which Keynes wrongly dubbs "classical") is pure fiction.

In Schumpeter the quantity of money and the volume of credits are endogenous magnitudes that reflect the innovation dynamics of the economy. Banks are capable of creating additional money via credit. While Schumpeter does not use the terms "asymmetric information", "moral hazard" and "adverse selection", it is clear that with regard to the difficult task the banks are facing these are precisely the problems to be tackled (see, for example, 1912: 387). How to select from amongst those who ask for credit in order to carry out their innovations, how to separate the wheat from the chaff? The money market, Schumpeter insists, is the "head quarter of the capitalist economy" (1912: 276). It decides the volume and the direction the capitalist "lifeblood" takes. Since according to Schumpeter the innovator typically enters the stage without funds, the banker has to bear the risk. It pays to be well informed and to be able to assess the liquidity seeking would-be entrepreneurs and their projects.

Keynes's view of liquidity preference and hoarding Schumpeter receives with disbelief. Additional liquidity is demanded by entrepreneurs not in order to hoard money, but in order to invest it and realise new combinations. He agrees with Marx, who stressed that "permanent crises don't exist", and is critical of Keynes, who denies this in terms of his concept of an "equilibrium with unemployment".[14]

Did Keynes in *The General Theory* take the quantity of money as given from the outside and determine the rate of interest endogenously? Yes and no. While in large parts of his book, often implicitly, Keynes assumes the quantity of money to be given, in other parts (especially in chapter 19) he does not.[15] When the IS-LM model starts from a given amount of money, this can clearly be justified with regard to central passages in *The General Theory*. This has lead to a controversy amongst Post Keynesians, in which critics drew the attention to the incompatibility of this assumption with the overall thrust of Keynes's theory. The idea that the Central Bank can, with sufficient precision, control the quantity of money, is difficult to sustain both theoretically and empirically. However, if the Central Bank is unable to do so and can at most fix the money rate of interest (or rather the levels and structure of money

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14 Things are invariably more complicated than Schumpeter seems to think, because both Marx and Keynes were convinced that capitalism is characterised by persistent involuntary unemployment; viz. Marx's concept of the "reserve army of the unemployed". None of them argued that there is a persistent excess supply of commodities; there may, however, be margins of excess productive capacity.

15 Schumpeter (1954: 1175) takes Keynes in *The General Theory* to have assumed an exogenously given quantity of money.

rates), then Keynes's contention of a rate of interest that is rigid downwards because of liquidity preference cannot be sustained any longer and a core element of his theory falters. If the Central Bank wishes to fix the nominal rate of interest at a level just above or equal to zero, then it can do so.[16]

Both Schumpeter and Keynes are convinced that the banking sector is inherently unstable and ought to be regulated.[17] In this regard Schumpeter advocates a view that is similar to Arthur Spiethoff's (see Kurz 2015a). While a judicious regulation of the sector is capable of mitigating and shortening crises and recessions, it cannot generally bring about a steady economic development. Cycles, we read in Schumpeter's *Business Cycles* (1939: v-vi), "are not, like tonsils, separable things that might be treated by themselves, but are, like the beat of the heart, of the essence of the organism that displays them." Seen from Schumpeter's point of view, the opinion recently expressed by authors like Robert Lucas and Ben Bernanke that there is the possibility of development without marked fluctuations in the short and long run ("The Great Moderation") is based on an elementary misapprehension of the mode of operation of capitalist economies.

Also Keynes considers the financial sector to be unstable. In a frequently cited passage he writes:

> Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious *when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done*. The measure of success attained by Wall Street, regarded as an institution of which the *proper social purpose is to direct new investment*

[16] The current situation demonstrates this vividly: The money rate of interest has not been prevented from falling to even negative rates in real terms. Alas, this fall did not sufficiently spur investment activity and lead the economy back to full employment. Piero Sraffa was convinced that Keynes was still the victim of "habitual modes of thought and expression", as the latter had famously put it. What matters is the volume of effective demand and not so much the level of the money rate of interest. It deserves perhaps to be mentioned that Piero Sraffa was critical of Keynes's respective argument and stressed already soon after the publication of *The General Theory* that, for better or worse, the theory of liquidity preference contains "all the functions considered in the system: it is, in fact, Keynes's system!" (see Kurz 2010: 197; see also Kurz 2015c).

[17] Hyman Minsky, the perhaps best-known advocate of the "financial instability hypothesis", was a student of Schumpeter and then became a close follower of Keynes. The doctrines of his two teachers prompted him to elaborate his theory; see Minsky (2007).

> *into the most profitable channels* in terms of future yield, cannot be claimed as one of the outstanding triumphs of *laissez-faire* capitalism. (*CW* VII: 159)

Yet contrary to Schumpeter, Keynes is convinced that a prudent economic policy may greatly contribute to a more steady economic performance. While he sees that innovations typically trigger business cycles, he apparently judges their primordial power as being less strong and our capability of taming their effects as stronger than the Austrian. Since there is no reason to count upon a change in the "psychology of investment markets", Keynes concludes "that the duty of ordering the current volume of investment cannot safely be left in private hands" (*CW* VII: 320). Interestingly he adds: "The right remedy for the trade cycle is not to be found in abolishing booms and thus keeping us permanently in a semi-slump; but in abolishing slumps and thus keeping us permanently in a quasi-boom" (*CW* VII: 322). Keynes takes issue with the view, advocated inter alia by Dennis Robertson, that continuous full employment is an "impracticable ideal" (*CW* VII: 327). The ideal, he insists boldly, can be realised, but this presupposes, as we have already heard, significant interventions into the economic system (see, for example, *CW* VII: 378). Why he thinks that marginalist economics, despite its advocacy of non-interference into the economic system, should apply precisely to an economy, in which a central authority governs the volume of investment, remains his secret.

Saving and investment

The proposition that saving is the key to economic prosperity and growth is one of the most important convictions held by the majority of economists, and this not only since Adam Smith's eulogy on the frugal man and his condemnation of the spendthrift. Marx qualified this view and the related doctrine of the original accumulation of capital as a "children's fairy tale", and both Keynes and Schumpeter, the latter explicitly (1939: 106 n.), agree with him. According to this view, investors are nothing but the obedient and zealous servants of consumers and savers, who channel savings to where the preferences of consumers signal the greatest need. The "vicarious function" of the entrepreneur thus consists in interpreting correctly the signals sent by consumers via the price system and orientating and utilizing the productive apparatus to serve the latter's needs and wants.

According to Schumpeter the picture of the subservient entrepreneur and the commanding consumer, as it comes to the fore in the concept of "consumer sovereignty", is grossly misleading. The "fundamental principle" of economic development, he emphasizes, is rather the "energetic action" of entrepreneurs (1912: 180). He calls consumers the "*static-*

hedonically disposed majority", who "*will not be persuaded to cooperate or will otherwise be won around to it*. Nobody asks its opinion. *It is rather forced into it*." (1912: 184; Schumpeter's emphases) Schumpeter goes so far as to say: The entrepreneur "commands" and the majority "must obey", and adds: The modern economy also knows "masters and servants, but on the surface this does not become so apparent" (1912: 185 and 188). In the English translation of the second edition of his *Theorie*, while being more diplomatic, the core of the message is the same:

> innovations in the economic system do not as a rule take place in such a way that first new wants arise spontaneously in consumers and then the productive apparatus swings round through their pressure. ... It is ... the producer who as a rule initiates economic change, and consumers are educated by him if necessary; they are, as it were, taught to want new things. (Schumpeter 1934: 65)

Entrepreneurs are the *agens*, the leading actors, of the capitalist economy, not consumers. There is no such thing as undiluted consumer sovereignty, which guides the economy. In this regard Schumpeter's view is similar to that of the American institutionalist John Maurice Clark, who had written:

> Economic wants for particular objects are manufactured out of this simple and elemental raw material [primitive instincts] just as truly as rubber heels, tennis balls, fountain pens, and automobile tires are manufactured out of the same crude rubber. *The wheels of industry grind out both kinds of products. In a single business establishment one department furnishes the desires which the other departments are to satisfy*. (Clark 1918: 8; emphasis added)[18]

Innovations generate new wants and the goods to satisfy them. The demand for goods is not autonomous, as is assumed in much of conventional microeconomics, but is shaped to no small degree by firms – by making new goods or new qualities of known goods available and by means of all kinds of promotional measures.[19]

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[18] In a similar vein Frank H. Knight ([1934] 1982) spoke of the "pervasive influence by sellers upon buyers and a general excessive tendency to produce wants for goods rather than goods for the satisfaction of wants."

[19] There is thus a cleavage between Schumpeter's eulogy on the theory of demand and supply in the theory of value and distribution and his dynamic view of the economy. If his conception of the determining role of the entrepreneur happens to be correct, then demand and supply functions are not independent of each other and not capable of determining price and quantity, as Marshall's "two blades of a scissors" analogy insinuates. Conventional economic theory starts from the axiom that the individual

Entrepreneurs propel the system forward. Their innovations awake it from slumber, make it expand and render it more productive due to new methods of production. Together with the resulting increase in national income saving will increase (see also Kurz 2012: 894). Schumpeter leaves no doubt that investment generates saving and not the other way round. In the circular flow, Schumpeter insists boldly, there are not only no profits and interest, there are also no savings. Like profits and interest savings are the "children of economic development" (see the next subsection).

We encounter a somewhat similar, but less radical view in Keynes. Net investment is the means by which the capital stock and productive capacity is increased. Such an increase is only undertaken if firms expect to be able to sell the larger output that can be produced with the larger productive capacity and make profits. Investment is thus taken to depend on long-term profitability expectations of firms. These reflect also expectations relating to innovations and thus inter alia to the future demand for goods, for which no markets exist as yet. However, Keynes focuses on the short run and the income effect of investment: he puts on one side the capacity effect and also what may be called the innovation effect, that is, the fact that (gross) investment is the vehicle by means of which new methods and means of production are introduced into the system. The larger the volume of investment, the larger output as a whole and national income, and the larger saving. The relationship between macroeconomic aggregates Keynes explains in terms of the theory of the multiplier and stresses: "It is increased output which produces the increased saving" (*CW* VII: 328), and not the other way round.

The views of Keynes and Schumpeter regarding saving and investment may thus be summarized as follows. In Keynes, because of idle productive resources, national income can increase due to larger investment via an increase in the utilization of productive capacity, and together with income savings will increase. In Schumpeter it is instead an increase in productive capacity entailed by investment in combination with an increase in the system's overall productivity that is the source of savings.

Capital and credit

What is "capital"? In a passage in locked (here: italic) print Schumpeter insists:

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agent's preferences are autonomous. If they are not, because resources can successfully be employed in order to change those preferences, then several propositions of microeconomics and welfare theory cannot be sustained.

Capital is nothing else than the lever that empowers the entrepreneur to subdue the concrete goods he needs to his command, nothing else than a means to allocate goods to new ends or a means to dictate the direction of production. (1912: 226)

And later he writes: Capital is credit, and credit is “the means of rule over production” (1912: 264-5). Already Marx is said to have held this view, and Schumpeter’s is “entirely” the same. Schumpeter insists that capital is neither produced means of production nor cumulated savings nor means of sustenance employed in roundabout ways of production and speaks of his “purchasing power theory of capital” (1912: 255). With this view he distances himself from basically all existing theories known at the time, classical, Marxian, marginalist or Austrian.

If capital is not equal to cumulated savings, then saving does not constitute “an “autonomous cause of development” (1912: 192). Schumpeter rejects the common identification of entrepreneur and capitalist: While the former needs purchasing power and wants to get it at a rate of interest that is as low as possible, the latter is possessed of it and wants to part company with it at a rate that is as high as possible. The relationship between entrepreneur and banker is therefore characterised by a conflict of interest.

Since Schumpeter assumes that in the circular flow the economy is fully employed, the innovator gets the needed productive resources not by using idle, but by redirecting employed resources. The banker allows the innovator “to become an entrepreneur, by giving him access to the productive resources of the economy” (1912: 198).

In the “capital market” we have, on one side, entrepreneurs and, on the other, bankers. “The object of exchange is present purchasing power, the price being future purchasing power. In the daily struggle between the two parties the destiny of future development is decided” (1912: 275). This market also decides about entrepreneurial profits and interest. Only to the extent to which new combinations lead to an increase in total revenue over and above the level in the circular flow, there will be a “surplus” of revenue over cost (1912: 278) as the source of profits and interest.

The credit volume is decided by the banks’ willingness to finance investments. This depends first and foremost on their assessment of the profitability of innovations. It also depends on the general economic climate; in depressions, for example, banks have little trust in people seeking credit in memory of their recent experiences, while in booms they frequently fall victim to “irrational exuberance” (Shiller 2000). A long-run orientation of banks and expertise knowledge in judging the investment projects put to them play a crucial role.

Both profits and interest, Schumpeter emphasizes, are children of capitalist development (1912: 392). Interest is “a sort of ‘tax on entrepreneurial profits’” (1912: 412), collected by banks. In phases of large innovation activities and high profits of firms the rate of interest is also high: it is a “*barometer of the overall economic situation*” (1912: 404). The “crux” of the matter is this: “How does an infinitely flowing interest income get separated from the permanently available, but individually always temporary, from the continually emerging, but individually always vanishing, the volatile and perpetually changing entrepreneurial profits of always the same capital?” (1912: 347) How does interest become a *perpetuum mobile*, to use Böhm-Bawerk’s expression? What constitutes that “strange suction apparatus that draws a permanent flow of goods [interest] from entrepreneurial profits?” (1912: 349).

Schumpeter’s answer is close at hand. Provided innovations are continually made, there will continually be the need for additional liquidity, hence there will continually emerge profits, from which interest will continually be siphoned off, whose size depends on the power relationship in credit markets. The level of the interest rate depends on the “price war between entrepreneurs and their potential financiers” (1912: 381). This price war, Schumpeter maintains, can be expressed in terms of a demand curve for credit facing a supply curve. The sum total of all profit expectations connected with the various innovation projects at a given time and place, each expressed in terms of the expected rate of return on investment, may then be brought into an order, beginning with the project yielding the highest expected rate of return, then the one yielding the second highest, and so on. Plotting this in a graph showing along the abscissa the cumulated investment sums needed to realise the various projects and along the ordinate the expected rate of return associated with the projects, we get the demand curve for credit. At the margin an investor is willing to pay so much interest for the borrowed sum as he expects to yield profits with it (including a risk discount).

Schumpeter’s concept is reminiscent of Keynes’s “marginal efficiency of capital” (or rather investment). In fact, Schumpeter anticipates the basic idea, but rejects the Keynesian (and also orthodox marginalist) view that the schedule is necessarily downward-sloping: investment demand, he surmises, need not rise (fall) with a fall (rise) in the money rate of interest over the entire range of relevant levels of the interest rate. Schumpeter transcends the narrow partial equilibrium framework within which the argument is typically couched and allows for the impact of changing levels of the money rate of interest on absolute (and relative) prices and costs. A higher rate of interest, Schumpeter argues, implies higher prices of a variety of goods, because interest is a

cost element. In order to realise a given innovation or investment project, the entrepreneur needs a larger liquid capital. This tends to increase the demand for credit and the overall volume of investment. On the other hand, a higher rate of interest implies that some projects can no longer be profitably undertaken. This tends to decrease the demand for credit and the overall volume of investment. As regards the combined effect, nothing definitive can be said without additional information. There is at any rate no presumption that credit and investment demand on the one hand, and the money rate of interest on the other, are necessarily inversely related, as Keynes assumes in accordance with orthodox economics. There is the possibility that, at least for some interval of values of the money rate of interest, aggregate investment demand and the interest rate move in the same direction (see Kurz 2012: section 5.4).[20]

About the supply of credit Schumpeter says essentially only that it is generally limited, while the demand can be expected to be always more or less brisk: "The demand for capital generates always additional demand from within. Therefore, in the money market a supply, however large, but limited, faces an effective demand that lacks any limit. … This must raise the rate of interest above the zero bound" (1912: 391-2). Alas, we are not told at which level the rate of interest will be fixed in a given situation. What is clear, though, is that the interest rate is taken to reflect above all the dynamics of innovation.

Schumpeter concludes his disquisition with the remark that he was keen to explain interest, not to "justify" it. His attitude towards interest and its recipients is, in fact, ambivalent. "Interest is not, like the entrepreneurial profit, an independent fruit of development in the sense of a bonus for its achievements" (1912: 413). Interest is a deduction from entrepreneurial profits and thus reflects the power relationship in the credit market. It is not the expression of a productive contribution, as especially Schumpeter's teacher Eugen von Böhm-Bawerk contended with his argument of the superiority of more roundabout processes of production.

Since interest derives from profits and is dominated by the latter, the rate of interest is typically smaller than the rate of profits on newly built capital, by means of which innovations are introduced into the economic system. Interest cannot thus determine permanently investment dynamics or even paralyse it, as in Keynes. The decisive moment is innovation dynamics. As early as his review of *The General Theory* of 1936, Schumpeter objects that

[20] This possibility raises the problem of the stability of the system on which Schumpeter has little to say.

because of Keynes's neglect of the productivity enhancing effects of innovations the latter advocated a totally misleading "vision" of the mode of operation of capitalism. Beyond that vision, the rate of interest loses "the pivotal position which it holds in Mr Keynes' analysis … [a]nd a completely different diagnosis of modern difficulties would follow" (1936: 795). Agreeing that interest is a monetary phenomenon and does not equilibrate saving and investment is one thing, understanding its specific role in the context of the economy as a whole is an entirely different thing. With regard to the latter Schumpeter and Keynes hold vastly different views.

5. Concluding remarks

Neither Schumpeter nor Keynes were "static" scholars in economics, they rather were "entrepreneurs". They did not try to make themselves feel at home as best as possible in the received marginalist citadel and contribute to its splendour and strength. They rather questioned its foundations and were keen to translate their very different visions of the working of the capitalist economy into economic theory. Whether because of their conviction or because of strategic reasons, neither of them broke completely with economic orthodoxy. They rather relegated its explanatory power to special cases, Schumpeter to the only moderately interesting case of a stationary economy, Keynes to the case of an economy in conditions of full employment, which is seen to be brought about by judicious economic policy measures. Schumpeter prided himself with having opened up the land of economic dynamics, with the process of innovation in capitalist economies assuming centre stage. Keynes contested Say's Law and the contention that the capitalist economy is supply constrained, and stressed against this the role of effective demand.

Their criticisms of economic orthodoxy exhibit several similarities, especially the rejection of the dichotomy of the monetary and real spheres of the economy, the proposition that investors are the devoted servants of consumers and savers, and the doctrine that the rate of interest equilibrates investment and saving. While it would not be fully correct to characterize Schumpeter's theory as long-run, dominantly concerned with the real sphere of the economy and the supply side and Keynes's as short-run, monetary and focusing on the demand side, as a first approximation this characterization would not be totally misleading. However, closer scrutiny shows that important corrections and amendments are indispensable. Whoever gives priority to investment over saving, cannot possibly totally reject the principle of effective demand, and whoever wishes to talk about the long run cannot do so without studying the

process of creative destruction. Keynes's theory exhibits deficiencies with respect to apprehending economic dynamics in the medium and long run, and both theoretical and empirical objects can be put forward against the proposition that the rate of interest is prevented from falling sufficiently because of liquidity preference. Schumpeter's contention that stationary economic conditions are necessarily states in which there are neither profits nor interest is both empirically and theoretically difficult to sustain, as is his attempt to trace both types of income exclusively back to innovations cannot be sustained; his concept of capital – credit used to finance innovations – is just this: idiosyncratic.

If we consider the heretical elements in the theories of Schumpeter and Keynes, the question is close at hand, what prompted both authors to stick to orthodox theory in its Walrasian and Marshallian variants. In their writings one looks in vain for convincing arguments in support of it. However, it would be expecting too much from a scientific innovator to anticipate the impact of his innovation on the further development of his discipline, as it would be too much to expect from an entrepreneur to anticipate the impact of his innovation on the market, which he is about to revolutionize.

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