Addressing Schumpeter’s Plea:  
Critical Realism in Entrepreneurial History  
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Abstract
Joseph Schumpeter’s plea for the use of historical methods to understand the dynamic nature of entrepreneurship remains for the most part unsatisfied despite some 60 years of effort and it is argued that the absence of a suitable research framework is a contributing factor to the largely fragmented results to date.

A critical realist approach is proposed as a suitable framework for addressing many aspects of Schumpeter’s plea. With its prioritisation of ontology, critical realism is more likely than the positivist/deductivist methods of mainstream economics to lead to the intellectually rigorous explanation of innovation, entrepreneurship and economic growth that Schumpeter was seeking.

Keywords: Joseph Schumpeter, entrepreneurship, entrepreneurial history, Center for Research in Entrepreneurial History.

Note: In this paper all works attributed to Schumpeter’s works are cited without his name, but only the date of publication. All other citations have author attribution.
I wish to state right now that if, starting my work in economics afresh, I were told that I could study only one [field in economics] but could have my choice, it would be economic history that I should choose. (J. A. Schumpeter, 1954 p.12)

History of Thought

Schumpeter’s Interest in Entrepreneurial History

Joseph Alois Schumpeter (1883-1950) began his economic studies in Vienna during the great Methodenstreit, a bitter dispute over methods that had raged since the 1880s. At the University of Vienna he encountered the thinking of the Classical School of Smith, Ricardo and Mill; the German Historical School of von Schmoller and sombart; and the Austrian School of Walras, Jevons and Menger. He saw merit in elements from all three: the market theories of the Classical School; the revolutionary new thinking about marginalism of the Austrian School; and his love of history attracted him to the detailed work of the German Historical School. (McCraw, 2007; Swedberg, 1993). This, and the influence of Weber give some early clues to the holistic approach to economics Schumpeter was to take later in his career: “When Schumpeter was young he was heavily influenced by Max Weber’s attempt to create a new and broad type of transdisciplinary economics, called Sozialökonomik, or ‘social economics.” (Swedberg, 1993 p.2). He even thought about writing a book reconciling the views of the Historical and Australian Schools (McCraw, 2007 p.57)

As the Twentieth Century progressed, a holistic view of the discipline was increasingly at odds with the fragmentation and narrowing of economics, with the mainstream, particularly in the United States, focussing on mathematically driven theoretical analysis of the static market. However, Schumpeter’s view was that a complete understanding of economic phenomena, requires a fusion of theoretical, historical, statistical and sociological perspectives: “What distinguishes the ‘scientific economist’ from all other people who think, talk, and write about economic topics is a command of techniques that we class under three heads: history, statistics, and ‘theory.’ The three together make up what we shall call Economic Analysis.” (1994 [1954] p.12) Later in the same chapter of History of Economic Analysis, Schumpeter adds a fourth technique: “...we shall find it useful, therefore, to introduce a fourth fundamental field to complement the three others...the field that we shall call Economic Sociology” and he explains its relationship to the other three: “... economic analysis deals with the questions [of] how people behave at any time and what the economic effects are they produce by so behaving; economic sociology deals with the question [of] how they came to behave as they do.” (1994 [1954] p.21)

Schumpeter’s interest in history as a technique of economic analysis was longstanding and not just something he discovered late in his life. While at different times, Schumpeter focussed on different perspectives, Swedberg (1991 p.55) traces his interest in the relationship between economics, economic history and sociology as far back as his first published book Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie [The Essence and Principal Contents of Economic Theory] (1908). Indeed, his exposure to the thinking of the Historical School was increased when, following his graduation from Vienna, he studied at the University of Berlin (McCraw, 2007 p.57)

Although Schumpeter argues that each of the four perspectives is necessary for the understanding of complex economic phenomena, none is sufficient on its own. He does not consider that economic theory alone can provide explanatory hypotheses, but requires complementary historical and statistical input: theory is just a "skeleton
of economic life” – “bloodless” and in need of “live fact” (Swedberg, 1991 p.57) and Schumpeter’s later works indicate he did not regard each of the four to be equal contributors to a complete understanding of economics: history is the dominant element: “We cannot stress this point sufficiently. General history (social, political and cultural), economic history, and particularly industrial history are not only indispensable but really the most important contributors to the understanding of our problem. All other materials and methods, statistical and theoretical, are only subservient to them and worse than useless without them.” (1939 p.13) Later in Business Cycles, Schumpeter explains how his ultimate goal is to present a:

...reasoned (conceptually clarified) history...of the economic process in all its aspects...to which theory merely supplies some tools and schemata, and statistics merely part of the material. It is obvious that only detailed historic knowledge can definitely answer most of the questions of individual causation and mechanism and that without it the study of time series must remain inconclusive and theoretical analysis empty. (1939 p.220)

Throughout his career the economic phenomenon that most fascinated Schumpeter was that of economic development. While not rejecting the usefulness of the popular equilibrium model as an analytical tool, he realised that the equilibrium of a static market could not explain the dynamics of economic growth. In The Theory of Economic Development he identifies three characteristics of economic development: it is endogenous to the economic system and not a reaction to external events or other stimuli; it is discontinuous rather than occurring in smoothly changing cycles; and it is disruptive to the status quo – old equilibrium conditions are radically changed. The endogenous stimulus is, Schumpeter argues, innovation which he sees as the creation of ‘new combinations’ – the introduction of new products, the introduction of new production processes, the opening of new markets, the acquisition of news sources of inputs or the reorganisation of firms or industry sectors (1934 [1912] p.66). As his thinking developed, by 1942 he was suggesting the disruption caused by innovation, especially as new firms producing new products by innovative processes put old firms out of business, was traumatic. He argues that this “creative destruction is the essential fact about capitalism” (1994 [1942] p.83) and the entrepreneur is the prime agent of economic change.

One can detect the influence of practical business developments, such as the evolution of registered limited liability companies, on the evolution of Schumpeter’s thinking about the entrepreneurship function. For example, when he wrote Theorie der wirtschaftlichen Entwicklung in 1911, he was in living in Europe and had studied the examples of the first industrialised nation – Great Britain – and also the extraordinary industrial development of the United States in the second half of the Nineteenth Century. In both countries the dominant forms of business structure were the owner-manager and the partnership, so it is understandable that the examples of entrepreneurship that Schumpeter studied and theorised about were overwhelmingly individual business owners. Although registered limited liability companies were permitted by the 1855 Companies Act in Britain, and earlier in the United States, they had not been lobbyed for by business owners, but by potential investors and financiers. For many decades, their take-up as a legal vehicle by business founders was limited to undertakings that required substantial initial capital for investment in fixed assets, such as the railways, shipping and mining. Most manufacturing enterprises at least started life as unincorporated firms until about the turn of the century. Estimates show that in 1885, for example, only between five and ten per cent of the most important companies were limited companies and in the United States it was not until World War I that the professionally managed joint-stock
company displaced family-owned and operated businesses and became the dominant form of business structure (Chandler, 1977; Hadden, 1977).

By the time he wrote Business Cycles (1939), Schumpeter was living in the United States and witnessing the effects of these changes on the way businesses operated. The limited liability corporation had become the dominant legal form, at least as far as larger scale enterprises were concerned, and issues of corporate innovation and team entrepreneurship must have exercised his mind. His theory of entrepreneurship went through a second incarnation in both Business Cycles and in Capitalism, Socialism and Democracy (1994 [1942]), with more emphasis given to role of innovation in economic growth through creative destruction, than on the character of the individual entrepreneur (Swedberg, 1993 p.172). Towards the end of his life, and by then a long time resident of the United States, Schumpeter reformulated his theory of the entrepreneur in three of the 15 articles he wrote between 1945 and his death in January 1950: The Creative Response in Economic History (1947) (a shortened version of Comments on a Plan for the Study of Entrepreneurship (1991 [1946]); Theoretical Problems of Economic Growth (1947); and Economic Theory and Entrepreneurial History (1949). (Swedberg, 1993p.171-172)

The final version of his theory of entrepreneurship still retains many of Schumpeter’s original 1911 concepts. The entrepreneur is still an innovator, not an inventor; he is not a risk-taker – this role is still attributed the capitalist financier; and he is only the entrepreneur during the creative or innovative phase of his firm’s development. When the enterprise matures and operations become routine, he becomes a manager. The final version is also consistent with his big enterprise 1939-1942 version in its move away from a focus on the individual, in that the entrepreneurial function is no longer vested in one person and may be performed by teams of executives: “The entrepreneurial function may be and often is fulfilled co-operatively.” (1989[1949] p.256). Schumpeter’s final version of the entrepreneur is also not so tightly integral to his other, more general economic theories. “In The Theory of Economic Development, he had constructed a series of other theorems – about profit, interest, banking and so on – with his theory of the entrepreneur as the base. In his articles from the 1940s, however, there is much less of this.” (Swedberg, 1993 p.173)

What distinguishes Schumpeter of the late 1940s is his realisation that the role of innovation and entrepreneurship in driving economic development, if it is to be widely accepted, needs to be validated by historical evidence:

> Entrepreneurial behaviour, in the Schumpeterian framework, made little sense without equal analytical attention to historical context in which it operated...Social scientific investigation of entrepreneurship needed to focus not only on entrepreneurs and their firms but also on the structure of and changes in the industries, markets, societies, economies, and political systems in which they operated. In the 1940s, Schumpeter repeatedly called for empirical historical studies of entrepreneurship. (Jones & Wadhwani, 2006b p.5-6)

**Schumpeter’s Plea**

The articulation of Schumpeter’s so-called plea appears at the beginning of his 1947 article, where he states: “Economic historians and economic theorists can make an interesting and socially valuable journey together, if they will. It would be an investigation into the sadly neglected area of economic change.” (1947 p.149). This article was shortened version of his Comments paper (1946) that was presented to a meeting of the Economic History Association in 1947 (McCraw, 2007 p.471; Swedberg, 1991 p.67), which contains greater elucidation of this plea.
The Comments paper refers to the "plan" contained in Arthur J Cole's 1946 presidential address to the Economic History Association entitled An Approach to the Study of Entrepreneurship: A Tribute to Edwin F. Gay (Cole, 1946). In this, Cole argues that Ricardo's failure to follow the lead of Cantillon and Say in distinguishing the unique role of the entrepreneur had "...rendered a great disservice to economics, and secondarily to economic history." (1946 p.3). He suggests that because economic progress is "...largely a consequence of innovations by individual enterprises copied by competing business units", this constitutes an "...adequate social reason for studying entrepreneurship" (1946 p.7). Although one can detect throughout Cole's address the conflation of entrepreneurial and managerial functions that is present in much entrepreneurial literature, he concludes that "To study the 'entrepreneur' is to study the central figure in modern economic history, and, to my way of thinking, the central figure in economics." (1946 p.8).

Cole argues that studying entrepreneurship history would provide an opportunity to synthesise work from a range of disciplines; including economics, business administration, business history, social history, psychology and political science, and he suggests several potentially productive areas for research. For example, the lack of historical research on the role of the profit motive:

...the hypothesis – almost invariably taken as self-evident – that the aim of all businessmen is and always has been the maximization of profits has been a primary element in economic theory over many decades, but actually no one has collected evidence to establish the truth of this contention...Actually we know precious little about the motivations of entrepreneurs or the changes in motivations over time. (1946 p.8-9).

He suggests that business evolution should be studied "...in terms of the 'disruptive innovating energy' which over recent centuries has been a continuously important factor in evoking change" and proposes an evolutionary model of entrepreneurship, based on stages of entrepreneurial thinking, as a framework for study. This model begins with "empirical entrepreneurship" which, Cole argues, prevailed in the United States and elsewhere until the Nineteenth Century, moving through the "informed entrepreneurship" of the middle of the Twentieth Century and culminates in the "cognitive entrepreneurship" of the leading business units of the 1940s. He argues these phases capture the "...increasing degree of effectiveness in the utilization of economic factors by that fourth factor in production: entrepreneurship" (1946 p.9-12).

Importantly, Cole argues that entrepreneurs do not act and make decisions in the abstract, but are constrained and enabled by "concrete living institutions" and social, economic and political factors, and therefore "...they can best be examined in concrete historical settings." (1946 p.12). As possible subjects for study he suggests entrepreneurs in specific eras and longitudinal studies of particular entrepreneurial functions or relations and concludes that:

...there are opportunities for factual investigations as diverse as the differences among us of temperament and intellectual values-from the intensive examination of a company's or an individual businessman's career to a wide-ranging effort at co-ordinating known facts into fruitful hypotheses...Some tools of analysis – some ploughs and harrows, if you will – have been fashioned, although we do not know but what they will 'foul' as did the cast-iron ploughs in prairie land. A few specimens of the soil have been treated scientifically. A few uncertain maps have been sketched. But the main rich territory awaits the intellectual explorers and exploiters who will locate and develop the more valuable sections. (1946 p.15)
As might be expected, in Schumpeter’s Comments on Cole’s approach, he concurs with the fundamental indictment that classical and neoclassical economics ignores “…the most striking feature of capitalist life – the incessant revolution, by a ‘disruptive innovating energy’, of existing industrial and commercial patterns” and his contention that economic behaviour cannot be understood if the actual or anticipated effects of technological and commercial change are ignored. Then, Schumpeter restates his view about the importance of history in understanding economic change: “A satisfactory analysis of economic change…can only be achieved by historical work…historical work alone can furnish material from which to arrive at scientifically reliable propositions about economic change and, therefore, about entrepreneurship.” He stresses the importance of understanding what entrepreneurs actually do in practice: “…how they really work, what it is that conditions their performance and their failures, how they in turn shape the conditions under which they work, and, above all, whether any significant generalisations may be made about all this can be gleaned from history alone.” (1991 [1946] p.406-7)

Schumpeter adds to Cole’s suggestions of areas for prospective historical research. For example, the nature, amount and distribution of entrepreneurial gains would benefit from the “…cumulation of carefully analysed historical cases is the best means to shed light on these things…” He highlights the tendency to emphasise the spectacular success of a single entrepreneur or firm bringing a new innovation to market. However, any entrepreneurial gain accruing to that individual or firm does not represent the gains to society of that process. The income and costs of the successful firm must be aggregated with those of competing entrepreneurs who failed in the attempt to bring the same innovation market, and the losses incurred by “old” firms displaced by the new product must also be taken into account. “Detailed investigation of this process, which may take many forms, might teach us much about the actual working of capitalism that we are but dimly perceiving as yet.” (1991 [1946] p.416).

However, Schumpeter points out that historical work on entrepreneurship need not start from scratch: “…every textbook of economic history contains some material about the origins of entrepreneurs of historical standing…” But there is a long way to go:

We do not know enough in order to form valid generalisations or even enough to know to be sure whether there are any generalisations to form. As it is, most of us economists have some opinions on these matters. But these opinions have more to do with our preconceived ideas or ideals than with solid fact, and our habit of illustrating them by stray instances that have come under our notice is obviously but a poor substitute for serious research. (1991 [1946] p.419).

Schumpeter endorsed Cole’s plans for the Center for Research in Entrepreneurial History. He argued that since a vast amount of historical work will be needed, it “…will be most effective if carried out according to a definite plan, it is indeed convenient to constitute an agency – an ‘institute’ or committee – that is to undertake the tasks of exploration and co-ordination, while leaving plenty of room for the initiative of individual workers.” (1991 [1946] p.420). Schumpeter concludes by condensing his plea for more academically rigorous historical investigation into one question that should be asked “…with reference to every country, time, industry and, possibly, leading concern: who was it that acted how and why and what were the effects that can be traced to such action?” (1991 [1946] p.424 emphasis in original).
The Development of Entrepreneurial History

Recognising the potential in Cole’s proposal, Schumpeter helped him to secure funding from the Rockefeller Foundation and the Center for Research in Entrepreneurial History was established at Harvard University in 1948. From the outset, Cole encouraged an interdisciplinary approach and the leadership team comprised Cole, sociologist Leland Jenks of Wellesley College, historian Thomas C. Cochran of New York University, and European economic historian Fritz Redlich. Younger graduate students attached to the Center included several that would subsequently make their names as economists, management academics and historians; including Alfred D. Chandler, David S. Landes, Hugh G.C. Aitken, Douglass North, R. Richard Wohl, and Adrien Taymans (Aitken, 1965; McCraw, 2007; Swedberg, 1993).

Schumpeter gave the Center his support by attending many of its meetings and presenting several notable papers, but at this time he was immersed in other work, particularly the writing of History of Economic Analysis. Cole remained the driving force, although he was to later write that without Schumpeter’s “zeal and support…the Center might readily have ‘die a-borning’” (Cole, 1950; cited in McCraw, 2007 p.473; and in Swedberg, 1993 p.172, but not locatable in the cited source).

Some of the younger researchers at the Center, including Aitken, saw the “Schumpetarian system” as sophisticated, detailed and essentially a complete theoretical construct. However, this group of “…rather aggressive egotistic young men…” did not see the clearing up of minor obscurities and “…the pedestrian work of historical illustration…” as an appropriate use of their talents. Although in awe of Schumpeter and his intellect, they “…would prefer not to be known as Schumpetarians…” and “…would rather start afresh, with new assumptions and a new point of view, and create [their] own theories.” (Aitken, 1965).

Then there was the issue of philosophical direction. These young scholars were a product of the increased narrowing, and mathematisation of economics. Their positivist deductivist outlook was not in harmony with Schumpeter’s more holistic approach. As Aitken was to later recall: “Our positivist stomachs rebelled at the taint of mysticism in Schumpeter’s concept of creativity; and our ideological pallets, conditioned during the late 1930s, found the heroic and aristocratic elements in his thinking distasteful.” (1965 p.10).

Schumpeter died less than two years after the establishment of the Center, but during the ten years of its existence, it produced an impressive body of work, much of it published in its own journal, Explorations in Entrepreneurial History. A book, Change and the Entrepreneur, contained an account of the first two years’ activities with major articles by Schumpeter, Cole, Jenks and Cochran (Anon, 1949). The sociological approach to business history pioneered by Jenks in his study of the development of American railroads (Jenks, 1944) was extended by he and Cochran to become the dominant approach to historical research on entrepreneurship in the 1950s. Seeking to understand how historical context and social structure shaped the character of entrepreneurship, the stream of work resulting from this approach “…amounted to the cumulative case the levels and character of entrepreneurship varied significantly over time and place…” (Jones & Wadhwni, 2006b p.7). This determinist argument was rejected by Alexander Gerschenkron, another associate of the Center, who pointed out that it ignored one of Schumpeter’s basic points, that entrepreneurs were as much agents of change as they were constrained and enabled by their socio-cultural environment (Jones & Wadhwni, 2006a p.11).

By the 1960s, American business and economic historians were increasingly following orthodox neoclassical economic theory and quantitative methods in their research and rejecting the multidisciplinary approach of Cole and Schumpeter. The
rising prominence of neoclassicism’s traditional cynicism of entrepreneurship as a concept was reflected in relaunch of *Explorations in Entrepreneurial History* as *Explorations in Economic History*, and its changed emphasis on quantitative studies. Chandler’s ambivalence about the autonomous role of entrepreneurs, and his organisational approach to business history, with its emphasis on the role of the American corporation in economic development, influenced a great many researchers and led to even greater marginalisation of entrepreneurial history (Jones & Wadhwani, 2006a p.7).

In parallel with these developments the writing of entrepreneurial biographies has continued. While a minority are intellectually rigorous in their approach, many more are hagiographical or are written for a purpose, for example, to ‘jingoistically’ support assertions about the supremacy of the American firm. Many are insufficiently rigorous in their methodology to provide any basis for the derivation of meaningful generalisations in the way Schumpeter advocates.

**The Incertitude of Schumpeter’s Methodology**

One can infer from Schumpeter’s writings, that if history is to play the leading role in understanding economic phenomena, not just any history will do. It must be history with a specific purpose. Narrative or descriptive accounts, while potentially useful, are insufficient – it must be history that is capable of explaining causation and identifying the mechanisms that cause individual observable events, and it must be capable of arriving at these explanations independently from the theory it is to validate. As Swedberg observes, the history that Schumpeter had in mind was analytical: “The result of the study of economic change should ideally be ‘an analytical history of enterprise’ – not just ordinary economic history.” (1991 p.68 emphasis in original)

One senses throughout Schumpeter’s arguments that while he was aware that “ordinary” economic or business history would not deliver the kind an explanatory analysis he was seeking, he had no alternative methodology to offer. On the one hand, he calls for a “critical systemization” of historical facts and “…an organised effort to penetrate through and beyond them toward reliable generalisations.” On the other, he is wary of the determinism to which this can lead and recognises that causal factors do not always produce the same empirical results: “As a rule, no factor acts in a uniquely determined way and, whenever, it does not, the necessity arises of going into the details of its modus operandi, into the mechanisms through which it acts.” (1991 [1946] p.410-11). This is an example of the “tension” in Schumpeter’s writing observed by da Graça Moura:

> Throughout Schumpeter’s work, as I see it, there is a repeated attempt to express a world view that turns on openness – innovation and structural transformation are his main concerns – with a deductivist framework that is accepted largely *a priori* and just cannot capture these features (da Graça Moura, 2004, p.281).

Da Graça Moura argues that Schumpeter’s tendency to deductivism is a function of the “intellectual atmosphere in which [he] worked” rather than “…a product of sustained reflection on the nature of the social world.” (2004).

Indeed, as da Graça Moura points out, Schumpeter himself suspected that he may be

…tainted with Scientism…[a] term introduced by Professor von Hayek to denote the uncritical copying of the methods of mathematical physics in the equally uncritical belief that these methods are of universal
A possible reason for the "tension" noted by da Graça Moura is that Schumpeter's preference for positivist methods is inconsistent with his apparent ontological understanding that causation depends on the activation of underlying causal mechanisms. As Sayer observes, the cause of an event has "...nothing to do with the number of times we have observed it happening." Therefore, adoption of positivist/deductivist methods \textit{a priori}, as described by da Graça Moura, may well lead to frustration at being unable to delve into the mechanisms underlying an observable event. Sayer argues that "explanation depends instead on identifying causal mechanisms and how they work, and discovering if they have been activated and under what conditions", which is not possible through positivist methods that depend on gathering data about repeated occurrences. As he suggests, such methods "...at best...might suggest where to look for candidates for causal mechanisms." (Sayer, 2000 p.14).

This may well be a valid conclusion about Schumpeter's body of theoretical work – that it serves as an indicator of where to look for the causal mechanisms of economic growth. We therefore argue that this represents a point of departure for an intellectually rigorous investigation, grounded in an appropriate ontological and epistemological framework, into these causal mechanisms. Further, we suggest that the lack of such an appropriate framework is largely responsible for the fragmentation of efforts to date. The positivist/deductivist approach that is almost \textit{de rigueur} today in economics and entrepreneurial research, particularly in the United States, has failed to deliver the explanatory account of economic growth that Schumpeter was seeking.

In summary, the authors of this paper concur with Jones and Wadhwani's conclusion that the style of entrepreneurial research envisaged by Schumpeter and Cole has "lost traction" in the drift towards the history of the corporation. The current narrow view of the economic world, with its emphasis on positivist, deductivist method, is an anathema to Schumpeter's eclectic and holistic approach and has indeed left entrepreneurial history "...fragmented and usually marginal to mainstream research agendas." (Jones & Wadhwani, 2006a p.32). We suggest that \textit{Schumpeter's plea in its original form has effectively been ignored by the mainstream economics discipline}. We also believe that Schumpeter's plea for greater interaction between the theory and history of entrepreneurship is essential to understanding the phenomena of economic growth, and the causal factors of innovation and entrepreneurship is as relevant today as they were 60 years ago, but this needs to be approached within a theoretical framework that is likely to yield plausible results.

We are not suggesting that the vast existing body of secondary literature is of no value to the approach we are proposing. Works by Chandler, Landes, Mokyr, Hughes, North and McCraw – to name just a few of the more prominent contributors – contain important descriptive accounts of business men and women, firms, markets and industries and, among more recent publications, \textit{The Invention of Enterprise} (Landes et al., 2010) provides a comprehensive overview of the global history of entrepreneurship. These are sources from which vital details may be abstracted as part of the deeper analysis we are advocating in response to Schumpeter's plea. Our intention, where possible, is to build on the descriptive content, not the resulting analysis, of the existing literature.

\textbf{Another Plea}

At this point we would draw attention to another, more recent plea that relates to Schumpeter. At a 2007 conference at Japan's Hitotsubashi University, Swedberg
called for “…the construction of a new theory of entrepreneurship of Schumpeterian inspiration…” using Schumpeter’s work as a point of departure:

Of all the theories of entrepreneurship that exist, his theory is still, to my mind, the most fascinating as well as the most promising theory of entrepreneurship that we have. Let me clarify. I do not argue that Schumpeter’s theory, as it is understood today, can supply the key to the mystery of entrepreneurship. What I would like to suggest, however, and also devote this paper to, is the argument that it may well constitute the point of departure for the development of the theory of entrepreneurship (Swedberg, 2007 p.2 emphasis in original).

Swedberg argues that there is much more to Schumpeter’s theory of entrepreneurship than that which appears in Chapter 2 of the English translation of The Theory of Economic Development (1934). Few entrepreneurship researchers are familiar with the rest of this work, or the extended first German edition of Theorie der wirtschaftlichen Entwicklung (1912) which has never been fully translated into English, or with what Schumpeter has to say about entrepreneurship in his later works. Swedberg proposes that: “First of all, we need considerably better knowledge of Schumpeter’s theory of entrepreneurship. And secondly, we need to start suggesting ways for how to complement and add to his theory of entrepreneurship.” (2007 p.2).

While we welcome this “plea”, and most certainly concur with the need for Schumpeter’s theories to be more fully understood, we suggest that extending those theories with the aim of producing “…one central theory of entrepreneurship, on which the various branches of entrepreneurship can build” (Swedberg, 2007) must still come within the ambit of Schumpeter’s ordinal plea for more historical research to complement any economic theory. We would therefore argue that the approach to such empirical research we advocate in this paper can be seen as an essential accompaniment to the extension of Schumpeter’s theories in the manner suggested by Swedberg.

The remainder of this paper will discuss these issues and propose a solution that addresses Schumpeter’s pleas in the true spirit that it was provided by Schumpeter himself in 1947. This second part of the paper is also an argument in support of a revival of Schumpeter’s vision for entrepreneurship research.

Methodology

Critical Realism: An Overview

This section is a brief outline of the principal features of critical realism and its application to social science research. Table 1 sets the scene by locating critical realism in the context of the two contrasting established paradigms in methodology: the positivist/quantitative methodology dominated by deductivist academic disciplines that consider “scientific rigour” as its highest priority (e.g. economics); and the constructivist/qualitative methodology dominated by inductivist academic disciplines that consider “subjective valuation” as its highest priority (e.g. gender studies). As can be seen from Table 1, critical realism methodology straddles the divide between the two established paradigms.
Contemporary critical realism has emerged from work on a realist philosophy of science in the 1970s by Rom Harré (Harré, 1970) and Roy Bhaskar (Bhaskar, 1978, 1998 [1979]). The principles of critical realism were first applied to the natural sciences and involve a shift in philosophical emphasis from epistemology (study of the way knowledge is obtained) to ontology (the study of being or existence), and a focus on the mechanisms that cause events rather than the events themselves. In *The Possibility of Naturalism*, Bhaskar (1998 [1979]) extended these principles to the realm of the social sciences.

Critical realism argues that objects possess inherent structures and causal powers or generative mechanisms. It is the exercise of these powers that cause events to occur or an object to behave in a given manner. These powers still exist even if not exercised and they may also produce no observable events even if exercised, for example, if a counteracting power is exercised at the same time (Danermark et al., 2002, p. 198). For example, we know from the natural sciences that all stars possess the power to emit energy in the form of light. Even though they exercise this power continuously, stars are not observable during daytime on Earth because of the counteracting power of light emitted by the closest star to us, the Sun. It is the identification of the inherent mechanisms that cause events that is the fundamental purpose of scientific study, in the social as well as the natural sciences (Danermark et al., 2002, p. 198). Since these mechanisms may or may not be activated, and if activated may or may not produce an observable event, they need to be analysed for necessity, sufficiency and potential – not only what was necessary for an event to happen, but whether it was sufficient on its own to cause the event and what might happen if it is activated again (Sayer, 2000 p.11).
Bhaskar (1978) distinguishes between the real, actual and empirical domains in which the objects and our knowledge of them are located. The real domain contains whatever exists, whether or not we have any knowledge of it. Within this, objects – natural or social – exist with their structures, their mechanisms and their causal powers, whether or not these are exercised (Sayer, 2000, p. 11). For example, an entrepreneur, together with her potential ability to invest in machinery, buy raw materials and hire staff to start a new enterprise are all located in the real domain. Within the actual domain, the causal powers of generative mechanisms are activated and cause events to occur, whether or not those events are observed or observable (Sayer, 2000, p. 12). For example, when the entrepreneur exercises her power to acquire the machinery or recruit the staff she needs. The empirical domain is the domain of sense-experience. This not only contains any properties of an object that are observable, but also those that are inferred and incapable of observation. According to Sayer (2000, p. 12): "...a plausible case for the existence of unobservable entities can be made by referring to observable effects which can only be explained by the products of such entities." For example, if we see machinery in production we can infer that the entrepreneur not only had the causal power to acquire it, but she has also exercised that power. We do not need to observe the purchase of the machinery through sense-experience to know it has been exercised.

In common with other forms of realism, critical realism contends the world around us exists independently of our knowledge of it (Sayer, 2000, p. 2). Bhaskar posits two dimensions of knowledge – intransitive and transitive. The objects of our study – whether natural objects, physical processes or social phenomena – are the intransitive dimension, while the theories and ideas of reality that make up our knowledge of these objects are the transitive dimension. In the social world, these theories and ideas are themselves social objects subject to be studied (Danermark et al., 2002, p. 200; Sayer, 2000, p. 10). While the objects in intransitive dimension are unchanging; transitive knowledge is socially produced, is fallible and evolves over time (Danermark et al., 2002, p. 200). While transitive knowledge evolves, the objects of that knowledge do not: "Rival theories and sciences have different transitive objects (theories about the world) but the world they are about – the intransitive dimension – is the same; otherwise they would not be rivals." (Collier, 1994 p.51) As Sayer (2000, p. 11) says: "...there is no reason to believe that the shift from a flat earth theory to a round earth theory was accompanied by a change in the shape of the earth itself."

**Empirical Research in Critical Realism**

There are significant implications for empirical research within a critical realism framework, and these implications go to the heart of Schumpeter’s plea. Harré (1970), Bhaskar (1978) and Bunge (2008) are among those who are critical of empiricism for its view that reality is restricted to the observable. Sayer contrasts this “flat” ontology, with critical realism’s concept of stratification. This posits that generative mechanisms belong to different strata, such as chemical, biological, psychological and social. The activation of these mechanisms in one strata produce new phenomena at a higher level through the process of emergence (Sayer, 2000). In Figure 1 there is an example of stratification in nature. Another key concept is that a resulting phenomenon possesses its own emergent properties that cannot be reduced to those of its constituents. For example, water has physical properties that neither of its constituent elements, oxygen and hydrogen, possess. Bhaskar therefore argues that reductionist explanations that take no account of emergent properties are deficient (1978).
This stratified ontology is fundamental to addressing Schumpeter's plea, since it sets up a model to take entrepreneurial history beyond deductive observation of entrepreneurial behaviour and action. It supports attempts to dig deeper into the lower strata of entrepreneurial activity to understand the structures, powers and mechanisms underlying the observable results of entrepreneurial action in the context of a defined historical period. This potentially explains the phenomena of economic development by exposing the causal factors of innovation and entrepreneurship.

**Causation in Critical Realism**

Critical realism takes a distinctive view of causation, particularly in its rejection of positivist explanatory models. The key objections are: (i) that they start from a false assumption in empiricist ontology that reality is limited to events and sense-experience observations; (ii) they account for causality as regularity in observed events, which does not explain anything; and (iii) they do not identify any causal mechanisms (Danermark et al., 2002, p. 108). In a social world of complex, open systems it is therefore inadvisable for researchers to rely on purely empirical observations when seeking to understand causal mechanisms (Danermark et al., 2002, p. 57).

Figure 2 illustrates a critical realist model of structures, mechanisms and events as they exist in a world of complex, open systems such as economic activity. When the real objects or structures activate their causal mechanisms, observable events are produced. The nature of the event, and what we humans observe, is determined by the interaction of the underlying causal mechanisms and, because events depend on contingent conditions, they are not reliably predictable. “A particular mechanism can produce completely different [results] at different times, and inversely the same event can have completely different causes.” (Danermark et al., 2002, p. 58) For example, observable event $E_7$ occurs when object $S_4$ activates its generative mechanism $M_5$. However, the activation of that same mechanism ($M_5$) may produce a different observable event ($E_6$) when a modifying mechanism ($M_4$) is activated by another object or structure ($S_3$). The example concerning the observability of stars on Earth noted previously is a concrete demonstration of this type of phenomenon and such complexity can not be understood or explained by either positivism or constructivism.
It is because different results can be produced by the same causal mechanism that generalisations based on the frequency of observable events can be misleading, but the distinction between the real and actual domains allows critical realists to reject causation based on successions of events and the search for general laws based on the regularity of their occurrence. They argue that the cause of an event is not related to the number of times it can be observed, but explanation depends on understanding how the underlying causal mechanisms operate, the conditions under which they do so (including the influence of conditions or other mechanisms) and whether they have been exercised in the case under investigation (Sayer, 2000, p. 14).

Event regularities are, in fact, only likely to occur under the special conditions of closed systems, when the underlying generative mechanisms can operate in isolation from other influences including the activation of other mechanisms (Danermark et al., 2002, p. 199; Sayer, 2000, pp. 14-15). Both the natural and social worlds are predominantly open systems and, therefore, generalisations at the level of the causal mechanisms may produce more reliable results since the underlying mechanisms tend to be more stable and enduring than the observable results they may produce.

Scientific explanation under critical realism comprises both abstract and concrete research: “Abstract theory analyses objects in terms of their constitutive structures, as part of wider structures and in term of their causal powers. Concrete research looks at what happens when these combine.” (Sayer, 1992, p. 116) Two classes of objects can be identified in the social world: people (or agents) and structures. Both possess underlying mechanisms and powers, and they enable and constrain each other, but the essential difference between the two is that only humans possess intention – structures cannot establish goals and initiate action to achieve them (Danermark et al., 2002, p. 178-9). The actions of a human agent in society may produce different results depending on the countervailing or amplifying mechanisms of societal institutions within which she is operating. Conversely, the results produced by societal structures may be modified by the actions of human agents and the actual events generated are affected by the prevailing spatio-temporal conditions. As more historical studies are conducted using critical realism in different contexts, and as more patterns of generative mechanisms are indentified and understood, more reliable generalisations about the nature of entrepreneurship should emerge.
Critical Realism and Research Methods

Critical realism is compatible with a wider range of research methods, both qualitative and quantitative, and advocates that the choice of method should depend on the nature of the phenomenon under investigation. This differs from positivist and interpretivist approaches, which tend to be more prescriptive about method. Indeed, one of Lawson's major criticisms of mainstream economics as an explanatory endeavour is its pre-occupation with mathematical modelling. He says:

…it is my assessment that the noted problems of modern economics stem from a widespread failure of the modern discipline to match its methods to the nature of its subject matter. Indeed, modern economics provides a very clear example of a rather narrow way of doing being unthinkingly and erroneously universalised a priori, with unfortunate consequences (2003, p. xvii).

Further, Easton suggests that critical realism can provide the ontological and epistemological framework often missing from case study-based research, which is essentially what Schumpeter was asking for:

I argue…that critical realism provides such underpinnings and seems ideally matched to case research…A critical realist approach to case research involves developing a research question that identifies a research phenomenon of interest, in terms of discernible events, and asks what causes them to happen (2010 p.127-8).

Since Bhaskar’s philosophical work, arguments for the use of critical realist approaches have been advanced in a variety of fields, including: economics (Lawson, 1997, 2003); economic geography (Morgan & Sayer, 1985); management studies (Fleetwood, 2007; Fleetwood & Ackroyd, 2004); sociology (Sayer, 2000); historical sociology (Steinmetz, 2004); as well entrepreneurship studies (Blundel, 2007). And Blundel, in particular, has agued the case for critical realism as a “vehicle” for entrepreneurship research and called for more “test driving” in the form of empirical research (2007 p.68)

Critical Realism and Schumpeter’s Plea

Following this brief outline of critical realism’s salient features, one can reflect back on Schumpeter’s plea for an openness to investigate innovation and structural transformation. The type of investigation Schumpeter envisaged cannot be conducted within the narrow deductivist framework of current mainstream economics, and explanations he was seeking have not been delivered by the vast amount of entrepreneurship research that has followed the same deductivist logic and pseudo-scientific rigour of economics. Schumpeter was wary of the determinism to which simple empirical historical accounts can lead and recognises that causal factors do not always produce the same observable results. There is much in Schumpeter’s call for “critical systemization” of historical facts that resonates with critical realism.

Therefore we argue that critical realism offers the most suitable research framework for addressing many aspects of Schumpeter’s plea. For example, his call for more in-depth studies: “It seems to me that, in order to understand fully a social system, or even a particular sector of it, it is necessary to go much more deeply into the details of functions, types, and performances that those analysts seem inclined to do who are content to work with types that are no more than general labels.” (1991 [1946] p.426)

The use of case study method within a critical realism framework is likely to answer his call for the “…cumulation of carefully analysed historical cases.” (1991 [1946)
p.416), while critical realism’s accommodation of spatio-temporal conditions, may help answer his question “Does the importance of the entrepreneurial function decline as time goes on?” (1991 [1946] p.417). The concept of a stratified reality with underlying generative mechanisms and causal powers, offers a means to answer Schumpeter’s call for “…an organised effort to penetrate through and beyond…toward reliable generalisations” and “…the necessity…of going into the details of [a historical phenomenon’s] modus operandi, into the mechanisms through which it acts.” (1991 [1946] p.410-11)

At a more general level, we consider that critical realism offers the methodological framework for deeper causal analysis that we noted earlier is often missing from Schumpeter’s writing, and we concur with Lawson’s contention that the lack an ontological conception such as critical realism explains the tension in his work noted by da Graca Moura (Lawson, 2003 p.57). In light of this, and in the spirit of Blundel’s call for more “test driving” of empirical research using critical realism (2007 p.68), one of the authors of this paper is using case study method within a critical realist framework to research the activities of Scottish entrepreneurs during the late Nineteenth Century economic boom that followed Australia’s Central Victorian gold rush of 1851. We encourage other researchers interested in answering Schumpeter’s plea to consider adopting a critical realist approach to their investigations.
References


