

Hayek on entrepreneurship: competition, market process and cultural evolution

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1. Introduction

Friedrich August von Hayek's theory of cultural evolution is usually regarded as a crucial contribution to an analysis of the institutional dynamism of market economies. It highlights the impact of rules and conventions in maintaining the extended order of the modern civilisation. The role of entrepreneurship in that line of reasoning, however, seems to have been largely neglected. Indeed, it is a well established position in discussions on the theoretical foundations of modern Austrian economics, that entrepreneurship has been most promisingly discussed in Ludwig von Mises' theory of human action, whereas Hayek is said to have focussed more intensely on the evolutionary mechanism of the competitive coordination of dispersed knowledge. Indeed, it is usually argued that Hayek dismissed the matter of entrepreneurship, for he neglected theorising on individual behaviour in favour of the analysis of rules and institutions.

Quite in contrast to that view, the present essay argues that Hayek's theory of cultural evolution is based on a conceptualisation of entrepreneurial activities which is decisive for the related concept of institutional change. The evolutionary role of entrepreneurship in the market process pinpoints the matter of search, experimentation and discovery. Despite its rather implicit character in Hayek's theorising, entrepreneurship then provides Hayek's theory of cultural evolution with constitutive arguments on the interplay of individuals, groups and institutions in the evolutionary process of economic development. The underlying line of reasoning ranges from entrepreneurial behaviour in competition to knowledge dispersion in the market process, informing the theory of cultural evolution as a comprehensive approach to institutional change in economic development.

In dealing with that subject, the essay proceeds as follows. First, the Austrian framework of theorising on entrepreneurship is taken to the fore, exploring the diverse conceptual strands of economic analysis that have shaped the Austrian perspective. In particular, the contributions of Menger, Wieser and Mises are taken to the fore. Second, Hayek's theory of the market process is examined with regard to the role of entrepreneurship in the experimentation and discovery procedures of knowledge coordination in market competition. It is pointed out that entrepreneurship promotes gradual evolutionary change within the economic system. Third, the related aspects of entrepreneurship are traced in Hayek's theory of cultural evolution, highlighting the matter of rules, traditions and knowledge. Indeed, in Hayekian terms, it is the developmental impact of pioneering entrepreneurs that facilitates those institutional and structural changes which characterise the growth of modern civilisation. In conclusion, Hayek's approach to entrepreneurship is assessed as an indispensable contribution to modern Austrian positions in economic analysis.

2. Austrian themes in the theory of entrepreneurship

Traditional contributions to neoclassical marginalism denote an analytical framework, in which scarce resources are allocated to meet given ends. Neglecting the role of entrepreneurship, equilibration is assumed to result from a seemingly automatic adjustment mechanism (Hébert and Link 1982: 52n). In particular, the essentials of the "marginalist revolution" of neoclassical economics have been summarised by the concept of opportunity costs, rational behaviour and individual choice, as well as by problems of information procession that lead to the question of the stability of

equilibrium (Spengler 1973: 211n). Walrasian theory represents the most abstract variant in that theoretical endeavour. In its static exchange model, the entrepreneur comes into play as a buyer of services which are used as inputs in production, operating with fixed technical coefficients (Jaffé 1967: 6n). Due to the zero-profit situation in equilibrium, the opportunity for entrepreneurial profit arises basically from arbitrage between competitive market prices and average costs. Thus, Walrasian entrepreneurship is essentially an equilibrating force (Walker 1986: 396n).

The Austrian School in the Mengerian tradition represents a variation of marginalism that promotes the case for entrepreneurship most explicitly in the context of uncertainty, knowledge and time (Martin 1979: 272n).¹ Menger's approach to entrepreneurship is part of his theory of production, in which the intertemporal coordination of the factors of production is of paramount analytical importance, with the entrepreneurial position depending on the knowledge-based direction of resources on markets and in the production process (Hébert and Link 1982: 59n). Menger's argumentation rests on a typology of goods that reflects the time structure of production and its rationale, namely the satisfaction of consumptive needs. It indicates that production is time-consuming, as its outcome remains uncertain (Menger 1871/1923: 27n).

These arguments shape the Mengerian concept of entrepreneurial activities as follows:

“The process of transforming higher order goods to lower order goods, respectively first order goods, if it is still an economic one, furthermore demands under all circumstances that it is arranged and led in an economic sense by an economising subject, that is, it proceeds with economic calculations, referred to above, and supplies or lets supply the higher order goods, including technological performances, to the process for real” (Menger 1871/1923: 153, translation by author).

The latter would include information on the economic situation, calculation required for arranging production; an act of will by which higher order goods are supplied to production, as well as supervision of actual production, but definitely not risk-taking. Entrepreneurial activities could be exercised by an individual in small enterprises, while they are often split among employees in large enterprises (Menger 1871/1923: 154). Hence, Menger sampled entrepreneurship and production in a common framework, stressing the satisfaction of established consumptive needs as a rationale of entrepreneurship.

In the succeeding generation of Austrian economists, Böhm-Bawerk's theory of production added nothing specific to that scheme of entrepreneurship, supposedly due to his analytical focus on time preference in the intertemporal coordination of production. Instead, it was Friedrich von Wieser, who excelled in the Austrian School with his theses on entrepreneurial leadership that should especially influence Schumpeter's theorising, well in addition to the price theory of imputation (Streissler 1981: 66n).² According to Wieser, the impulse for development corresponds with the impact of novelty and leadership. While the leadership function proves to be the decisive aspect of entrepreneurship, it is accompanied by the role of the entrepreneur as a risk-taker. Both leadership capabilities and property of capital are addressed as indispensable conditions for achieving an entrepreneurial position (Wieser 1914: 353n). Consequently, Wieser maintains that the historical emergence of capitalist enterprise is related with “pioneers”

¹ Compared with the related theories of Walras and Jevons, it has been proposed that the Mengerian position resembled a kind of institutional economics (Jaffé 1976: 520).

² Lasting Wieserian contributions to economic theory include the concept of optimal resource allocation according to marginal productivity of the factors of production and the role of prices as carriers of information (Streissler 1986: 85).

who “open up new ways” by making use of technological knowledge and organisational leadership, characterised by the “courage of the innovator” (Wieser 1914: 375n). Large enterprises evolve as a result of entrepreneurial leadership, quite in analogy with the formation of dynastic empires (Wieser 1914: 406n).

Wieser even maintains that the emergence of large bureaucratic enterprises stimulates an institutional transformation of entrepreneurship, for personal talent is replaced by the disposal of capital, while technological problems and their solutions could be treated as data, to be solved by professional engineers and managers (Wieser 1892: 110). Wieser thus announces a transformation towards a bureaucratic-administrative type of governance, in which economic leadership and enterprise are detached. The emerging mass character of economic life is illustrated by invoking the image of anonymous shareholders and employees in corporate business organisations (Wieser 1914: 354n). Yet Wieser points out that entrepreneurial leadership retains its function of establishing organisational guidance also in a socialist society (Wieser 1892: 122). This developmental vision underlines major concerns that are shared by Schumpeter’s theory of economic development.

Schumpeter deals with innovation as the internal force of discontinuous evolutionary change, carried out by the means of entrepreneurial leadership. Indeed, Schumpeterian entrepreneurship should reflect the impact of leadership, based on the interplay of imagination and creation, identified as a most relevant endogenous source of socio-cultural change in general, and of economic development in particular (Schumpeter 1912: 124n). The role of entrepreneurial leadership is derived from the innovative disruption of the routines of the circular flow, as novelty is forced upon the majority of economic agents (Schumpeter 1912: 185n). The clustering of innovations is derived from these effects of entrepreneurial leadership, for pioneering innovations enlarge opportunities for further ventures (Schumpeter 1939: 100n). With ongoing processes of bureaucratisation and rationalisation, however, the obsolescence of personal entrepreneurship heralds socialist transformation, accompanied by government interventions and the establishment of innovation as an organisational routine (Schumpeter 1942: 131n).

This perspective on the dynamism of capitalism reflects a discourse on the advent of socialism and its Marxist prophets that had been prevalent in Austrian marginalism, as exemplified by Böhm-Bawerk’s criticism of the labour theory of value. Wieser also confronts Marxian ideas, especially regarding the theoretical aspects of economic organisation in a collectivist setting (Streissler 1986: 100). Indeed, Austrian contributions to the socialist calculation debate, as introduced by Mises, were directed at the same set of problems, namely a critique of socialist organisation. Yet in contrast to subsequent Schumpeter’s argumentation, which was influenced by Walrasian theory, Mises always kept the Austrian position of an unfeasibility of socialism. Hayek then emerged as an eminent representative of that Austrian criticism of policy interventionism and the ideal of central planning.

Indeed, with a focus on these aspects, the modern Austrian perspective in economic theory was established by Mises and Hayek following major efforts in monetary business cycle theory and capital theory since the late 1930s (Kirzner 1999: 19n). The commonly shared theoretical position of modern Austrian economics highlights key categories of time and ignorance, pointing to novelty and uncertainty in the irreversible historical flow of events as well as to the subjective character of knowledge. Austrian economics then deals with an unforeseeable process of coordination and discovery, shaped by institutional rules, while unintended consequences of individual action are

perceived as constitutive factors of the economic process in terms of a spontaneous order (O’Driscoll and Rizzo 1985: 5n).

Mises’ approach of “praxeology” pinpoints a theory of human action that formulates universally valid principles underlying human behaviour which are needed as a priori devices for categorising and explaining the objects of inquiry (Mises 1949: 32). Lionel Robbins’ landmark definition characterises economics as a science that studies human behaviour as a relationship between a given hierarchy of ends and scarce means which have alternative uses. For Mises, however, a theory of choices regarding the allocation of scarce resources according to alternative ends-means frameworks should constitute the analytical focus. His aprioristic approach is concerned with the logic of choice and action (Koslowski 1990: 6). Hence Mises suggests on the subject matter of economics: “The sole task of economics is the analysis of the actions of men, is the analysis of processes” (Mises 1949: 354).

The notion of entrepreneurship represents a major concern in that theoretical scheme. A point of departure is provided by the notion of the evenly rotating economy, in which no specific functions for entrepreneurs are exercised, while economic agents behave like mechanical devices, with no choices to make and no purpose to proceed with (Mises 1949: 249). Economic change sets in as soon as choices need to be made. According to Mises, entrepreneurship belongs to the core features of economic processes which are time-consuming and uncertain. Mises then presents a concept of entrepreneurship that is attributable to all economic agents who participate in the equilibration of market constellations (Mises 1949: 253n). In particular, entrepreneurship should imply activity in the face of uncertainty: “Entrepreneur means acting man in regard to the changes occurring in the data of the market” (Mises 1949: 255). Indeed, Misesian entrepreneurship needs to be assessed in the framework of this concept of the “*homo agens*” that senses rational behaviour as a universally valid pattern, based on a methodology of apriorism.

While the latter position has become subject to considerable controversy in modern Austrian economics, still its major proponents tend to underline their intellectual indebtedness to Mises’ theorising. Further explorations into the Austrian approach to entrepreneurship follow that line of reasoning, well represented by Kirzner’s market process theory with its concept of entrepreneurial alertness that underlines an understanding of human action as active and creative (Kirzner 1973: 35). Kirznerian entrepreneurship deals with gradual patterns of economic change by the means of individual alertness in the discovery procedures of the market process. Yet these aspects are also part of Hayek’s research agenda, which goes beyond Mises’ efforts in accounting for the evolutionary qualities of knowledge and institutions. Still, in the discussion on the intellectual orientation of modern Austrian economics it is usually argued that Hayek has neglected the theoretical complexity of entrepreneurship, whereas Mises has underestimated the theoretical impact of knowledge coordination (Kirzner 1999: 22n). This is in agreement with the proposition that Hayek’s methodological individualism differs both from neoclassical standard theory and Mises’ apriorism in denying the “given” status of individual rationality as a basis of human action, while focussing on supra-individual patterns on the level of markets and institutions (Caldwell 2001: 550n).³

However, the following section proceeds with the argument that the notion of entrepreneurship is not only constitutive for the Hayekian approach to the competitive

³ It even has been proposed that Hayek’s emphasis on the role of subjective knowledge in the market coordination of individual plans is at odds with Mises’ emphasis on economic calculation through market prices as a means of purposeful economic behaviour (Salerno 1993: 130).

dynamism of the market process, but also for the related theory of cultural evolution. The Hayekian entrepreneur resembles an agent of change, whose activities are relevant both in the market process and in the even more encompassing cultural sphere of rules and traditions that reflects the increasing complexity of the extended order of modern society. With regard to the matter of individual behaviour and institutional change as an area of theoretical clarification in the Hayekian framework, it is argued that the reconsideration of the notion of entrepreneurship contributes to an adequate understanding of the relationship between individuals and institutions in Hayekian thought. The following section thus explores the role of entrepreneurship in Hayek's theory of the market process.

3. Hayek on the role of entrepreneurship in the market process

The distinction between made order and spontaneous order outlines the conceptual foundations of Hayek's theory of the market process. The made order represents an artificial construction that needs to be understood as a deliberately designed type of order in terms of an organisation, while the spontaneous order is perceived as a self-generating and self-organising type of grown order – a product of human action but not of human design (Hayek 1973: 37). In this framework, the market process is characterised as an economic manifestation of the general principles of the spontaneous order. In particular, Hayek's theory of the market process takes its analytical point of departure in explorations on the decentralised coordination of individual economic plans by proceeding with research in business cycle analysis. These initial efforts in business cycle theory highlight exogenously generated disturbances of the economic process, as banks would erroneously reduce monetary rates of interest below the corresponding natural rates, fuelling investment decisions which are not in accordance with prevailing time preferences, and thus contribute to disequilibrium. Subjective knowledge and market coordination then constitute basic analytical challenges. In particular, Hayek argues that the division of knowledge, fashioned in analogy with the division of labour, brings about the problem of coordinating fragmented knowledge no central authority can possess on its own (Hayek 1937: 49).

While emphasising the subjective character of knowledge in economic coordination, Hayek's use of the category of knowledge should involve both scientific knowledge as a universal type and the subjective knowledge of particular circumstances, conditioned by time and space, which is not to be quantified and measured statistically. The subjective acquisition of knowledge in learning processes then shifts established traditions and routines; an argument that underlines once more the subjective sources of institutional change in the Hayekian scheme of analysis (Garrouste 1994: 279). Accordingly, the matter of coordination transcends the static limitations of Lionel Robbins' famous formulation on allocation as the constitutive economic problem: "The economic problem of society (...) is a problem of the utilization of knowledge not given to anyone in its totality" (Hayek 1945: 519n).

Hayek characterises the price system of the market order as the most efficient mechanism for the decentralised communication of information in complex economic systems, characterised by a dispersion of subjective knowledge among the economic agents. The subjectivist underpinnings of that position also inform the Hayekian critique of Walrasian equilibrium theory with its characterisation of market prices as carriers of objective knowledge. Related attempts at modelling a socialist system of administrative planning by using Walrasian arguments are thus dismissed. This is quite in agreement

with the Austrian concept of the entrepreneur as a figure that performs equilibrating feedback functions which are similar to the Walrasian auctioneer, although the former dispenses from the centralist coordination structure of the Walrasian approach by contributing to the decentral coordination of the plans of economic agents in the market process (Schmidtchen 1990: 141). Affirming the evolutionary character of market processes, Hayek points to the persistence of change as a crucial feature of market economies:

“(E)conomic problems arise always and only in consequence of change. So long as things continue as before, or at least as they were expected to, there arise no new problems requiring a decision, no need to form a new plan. The belief that changes, or at least day-to-day adjustments, have become less important in modern times implies the contention that economic problems also have become less important“ (Hayek 1945: 523).

Entrepreneurship demotes the search, discovery and adjustment procedures of economic agents who are active in promoting those changes which characterise the market process. In particular, entrepreneurship in Hayekian terms mirrors the relationship between competition and knowledge, rooted in the condition that every economic agent commands a specific advantage in his subjective knowledge. This is exemplified by the entrepreneurial figure of an arbitrageur who gains from local price differentials (Hayek 1945: 521n). The orientation of entrepreneurship is shaped by the signalling function of relative prices: “Price relations alone tell the entrepreneur where return sufficiently exceeds costs to make it profitable to devote limited capital to a particular undertaking. Such signs direct him to an invisible goal, the satisfaction of the distant unknown consumer of the final product” (Hayek 1988: 100). While following these price signals in the market process, entrepreneurs are guided by the profit motive as a general type of motivation that abstracts from personal specificity in proceeding with economic interactions, thus allowing for discovery and innovation as developmental functions: “The entrepreneur *must* in his activities probe beyond known uses and ends if he is to provide means for producing yet other means which in turn serve still others, and so on – that is, if he is to serve a *multiplicity* of ultimate ends” (Hayek 1988: 104, emphasis in original).

The ethos of that kind of rule-based open society with its extended division of labour and system of market exchange highlights the virtues of entrepreneurial activity with reference to the values of Calvinism, among others: “In its purest form this ethos regards it as the prime duty to pursue a self-chosen end as effectively as possible without paying attention to the role it plays in the complex network of human activities” (Hayek 1976: 145). This ethic does not necessarily include an egoist striving for material gain, as outlined by Adam Smith, for the decisive point is the satisfaction of anonymous needs in the context of the market process, allowing for complex economic activities beyond the confines of separate groups, while the earned entrepreneurial profits may be used for non-economic ends which may reflect community-based ideals (Hayek 1976: 145). However, this relativity of motives coincides with the appreciation of the economic self-interest of economic agents: “Competition as a discovery procedure must rely on the self-interest of the producers, that is it must allow them to use their knowledge for their purposes, because nobody else possesses the information on which they must base their decision” (Hayek 1979: 70).

Apart from motivational aspects, the specific gain from entrepreneurial activities in the market process is legitimised through the indispensable developmental impact of competitive discovery:

“Yet there can be no doubt that the discovery of a better use of things or of one’s own capacities is one of the greatest contributions that an individual can make in our society to the welfare of his fellows and that it is by providing the maximum opportunity for this that a free society can become so much prosperous than others. The successful use of this entrepreneurial capacity (and, in discovering the best use of our abilities, we are all entrepreneurs) is the most highly rewarded activity in a free society, while whoever leaves to others the task of finding some useful means of employing his capacities must be content with a smaller reward“ (Hayek 1960: 81).

This type of entrepreneurship is presented as an institutional characteristic of market systems, involving “creative powers of a free civilization” that parallel “spontaneous forces of growth” in terms of the decentral coordination of economic activities (Hayek 1960: 38). However, the decisive role of entrepreneurship in the market process remains usually unnoticed in terms of increasing productivity and rising standards of living; a situation that fuels atavistic judgements on the unjust character of entrepreneurial activities and related earnings (Hayek 1988: 92n).

At this point, Hayek is quite in agreement with Mises in pointing to egalitarian demands for social justice as well as to the related idea of socialism as an outcome of group-oriented atavism and its collective instincts, which need to be overcome by the individualism of the market order, whereas Wieser and Schumpeter as Austrian counterparts actually view entrepreneurship as driven by motives of atavism, relating it with socio-economic functions of leadership (Ebner 2003: 117n). Still, some common ground with the latter is provided by Hayek’s suggestion that economic change reflects the innovation efforts of a pioneering minority of producers and consumers, who shape the pattern of diffusion and learning: “All new tastes and desires are necessarily at first tastes and desires of a few, and if their satisfaction were dependent on approval by a majority, much of what the majority might learn to like after they have been exposed to it might never become available” (Hayek 1979: 49).

However, due to the character of subjective knowledge, involving non-codified tacit knowledge as well as local knowledge that reflects the impact of particular settings and circumstances, entrepreneurial activities prove to be unpredictable:

“Much of the knowledge of the individuals which can be so useful in bringing about particular adaptations is not ready knowledge which they could possibly list and file in advance for the use of a central planning authority when the occasion arose; (...) what they possess is a capacity of finding out what is required by a given situation, often in acquaintance with particular circumstances which beforehand they have no idea might become useful” (Hayek 1976: 187).

Accordingly, the Hayekian notion of knowledge-based entrepreneurial discovery underlines the substantial uncertainty of economic development, paralleling the progress of knowledge in science, with all of its systematic as well as spontaneous characteristics:

“(M)ost scientists realize that we cannot plan the advance of knowledge, that in the voyage into the unknown – which is what research is – we are in great measure dependent on the vagaries of individual genius and of circumstance, and that scientific advance, like a new idea that will spring up in a single mind, will be the result of a combination of conceptions, habits, and circumstances brought to one person by society, the result as much of lucky accidents as of systematic efforts” (Hayek 1960: 33).

Indeed, the matter of determinism in economic processes fuels Hayek's criticism of arguments on the developmental inevitability of industrial concentration, as promoted among others by Schumpeter, interpreting the emergence of large enterprises as carriers of large-scale technologies in terms of an organisational shift towards central coordination. At this point, Hayek claims that decentral adjustment would remain crucial in economic change, not at all losing in importance due to an increase of technological knowledge and a related extension of time intervals in investment decisions (Hayek 1945: 523).

In accordance with that position, the persistence of the competitive patterns of the market process implies that continuous learning is necessary for all economic agents, while competition drives the diffusion of rationality all over the economic system: "And it is therefore in general not rationality which is required to make competition work, but competition, or traditions which allow competition, which will produce rational behaviour" (Hayek 1979: 76). In Hayekian thought, competition, entrepreneurship and innovation go hand in hand, based on the rationalising impact of pioneers on established patterns of economic behaviour and organisation. Indeed, economic competition and institutional change tend to run parallel, as long as the general rules that constitute market competition prevent the majority of economic agents from obstructing the introduction of innovations by the use of force and coercion against the pioneering minority, which is itself held to stick to the rules of competition:

"Competition is, after all, always a process in which a small number makes it necessary for larger numbers to do what they do not like, be it to work harder, to change habits, or to devote a degree of attention, continuous application, or regularity to their work which without competition would not be needed" (Hayek 1979: 77).

However, complementing entrepreneurial discovery and innovation as driving forces of the market process, related procedures of imitation are identified as crucial economic activities that stabilise and maintain the order of the market: "It was the thousands of individuals who practised the new routine more than the occasional successful innovators whom they would imitate that maintained the market order" (Hayek 1979: 165). This is in agreement with Hayek's emphasis on the gradual character of technological and institutional change, highlighting the embeddedness of innovation and imitation in established rules and traditions, as "all progress must be based on tradition" (Hayek 1979: 167). At this point it may be argued that Hayek seemingly neglects the matter of novelty in economic change and related evolutionary processes, upholding a focus on gradual variations within an established setting. Therefore, Hayek's concern with innovation as an entrepreneurial outcome has been largely underrated in corresponding assessments of his theory of the market process. Moreover, even the more encompassing theory of cultural evolution, which applies the notion of spontaneous order to the evolution of rules and institutions in the historical development of civilisations, has been primarily perceived in terms of Hayekian ideas on imitation and adaptation. Confronting that position, the following section presents an account of the role of entrepreneurship as the driving force of institutional change in Hayek's theory of cultural evolution.

4. Entrepreneurship in the Hayekian theory of cultural evolution

The notion of market competition as a discovery procedure points to the theory of cultural evolution which is also concerned with the matter of knowledge and learning,

that is, the process of competitive selection among rules and other institutions that define frameworks for social interaction. According to Hayek, the trial and error procedures of the market process, that are also dealing with rules as problem-solving devices, are to be viewed as an element of the innovation and selection of rules and institutions in cultural evolution, shaping the market order and allowing for the combination of individual liberty and societal complexity in the progress of civilisation (Vanberg 1994: 100n). Crucially, Hayek thus suggests that the rules and institutions of society are shaped by customs and habits, which are not the result from efforts in purposeful design.

These rules that constitute the character of the market order by governing individual behaviour are either almost invariant genetically-inherited rules or historically variable learned, culturally-transmitted rules which are subject to institutional competition in cultural evolution (Vanberg 1994: 78n). Accordingly, rules which guide human behaviour in terms of underlying traditions result from an evolutionary selection procedure that contradicts the constructivist position on cultural evolution as driven by human reason: “Man is as much a rule-following animal as a purpose-seeking one” (Hayek 1973: 11). In that context, Hayek underlines that competition constitutes the basic feature of both biological and cultural evolution; highlighting competition as the decisive evolutionary force (Hayek 1988: 26).

Even in his earliest elaborations on that subject, Hayek applies his arguments to a historical process like industrialisation, which is attributed to market competition as a discovery procedure regarding material and human resources. This role of competition also seems to be most important in cases of underdevelopment, for the particular discovery procedures in developing economies are settled in an early stage, leaving habitually-oriented economic agents without experience from past competition as a device for future decisions (Hayek 1978b: 188). Already in the “Road to Serfdom”, Hayek analyses the institutional dynamism of economic development in terms of the spontaneous order:

“During the whole of this modern period of European history the general direction of social development was one of freeing the individual from the ties which had bound him to the customary or prescribed ways in the pursuit of his ordinary activities. The conscious realization that the spontaneous and uncontrollable efforts of individuals were capable of producing a complex order of economic activities could come only after this development had made some progress” (Hayek 1944: 18n).

In particular, Hayek proposes that the evolution of knowledge since the Renaissance contributed decisively to that development process, based on individual economic initiative, which led to the establishment of modern capitalism, defined as “a competitive system based on free disposal over private property” (Hayek 1944: 77). Individualism reinforced the progress of scientific knowledge in the discovery procedure of market competition, thus contributing to the comparative success of capitalist economies:

“Perhaps the greatest result of the unchaining of individual energies was the marvellous growth of science which followed the march of individual liberty from Italy to England and beyond. (...) Only since industrial freedom opened the path to the free use of knowledge, only since everything could be tried – if somebody could be found to back it at his own risk – and, it should be added, as often as not from outside the authorities officially intrusted with the cultivation of learning, has science made the great strides which in the last hundred and fifty years have changed the face of the world” (Hayek 1944: 19).

Cultural evolution is thus linked to the growth and diversification of knowledge; a topic that is explored furthermore in the “Constitution of Liberty”. There, Hayek argues that the growth of knowledge implies a decrease of individual shares in the total complex of the division of knowledge, thus contributing to a relative deepening of subjective ignorance, while advancing the requirement for a coordination of decentralised knowledge. These coordination efforts should involve specific institutional forms of knowledge, like habits, rules and even technological aspects; all of them subject to an inherent variety of forms that shapes individual behaviour:

“The growth of knowledge and the growth of civilization are the same only if we interpret knowledge to include all the human adaptations to environment in which past experience has been incorporated. (...) Our habits and skills, our emotional attitudes, our tools, and our institutions – all are in this sense adaptations to past experience which have grown up by selective elimination of less suitable conduct. They are as much an indispensable foundation of successful action as is our conscious knowledge. Not all these non-rational factors underlying our action are always conducive to success. Some may be retained long after they have outlived their usefulness and even when they have become more an obstacle than a help. Nevertheless, we could not do without them: even the successful employment of our intellect rests on their constant use” (Hayek 1960: 26).

Innovations in institutional and technological terms should be perceived as adaptations to changing data:

“The undesigned novelties that constantly emerge in the process of adaptation will consist, first, of new arrangements or patterns in which the efforts of different individuals are coordinated and of new constellations in the use of resources, which will be in their nature as temporary as the particular conditions that have evoked them. There will be, second, modifications of tools and institutions adapted to the new circumstances (Hayek 1960: 32n).

Hence, cultural evolution according to Hayek is based on a trial-and-error process which combines intentional and unintentional experiments in proceeding with institutional and technological innovations as an adaptation to changing socio-economic conditions (Vanberg 1992: 109).

Hayek’s evolutionary theory of institutional change then follows a scheme of variety, transmission and selection. Underlining the aspect of efficacy in cultural evolution, Hayek suggests: “It is in the pursuit of man’s aims of the moment that all the devices of civilization have to prove themselves; the ineffective will be discarded and the effective retained” (Hayek 1960: 36). The introduction and dissemination of novelty is promoted by an institutional framework which allows for variety in the competitive discovery procedures that drive economic development (Hayek 1960: 37). The institutional structuration of particular groups serves as the basis of knowledge transmission, while selection also intervenes on the group level, in accordance with capabilities for learning and innovation (Hayek 1960: 36).

This hint at the group level of evolutionary selection is explored in more detail in the volumes on “Law, Legislation and Liberty”. Hayek suggests that the evolution of rules coincides with the cultural evolution of groups, societies and whole civilisations, as groups that adopt those rules within their particular order which are most conducive to growth and development in a certain setting tend to be more successful in terms of material reproduction. Decisive is not only the coherent order that is achieved within the networks of personal relationships inside the particular groups, but also the opportunities that are offered for outward oriented contacts which contain impersonal

relationships (Hayek 1973: 99). Indeed, the market system in the extended order of the Hayekian “Great Society” presupposes institutional conditions for complex exchange relations among anonymous participants in the division of labour. Therefore, entrepreneurship in cultural evolution denotes a behavioural pattern of extending the domain of individual interaction and exchange driven by “rule-breakers” who would become “path-breakers”: “Most of these steps in the evolution of culture were made possible by some individuals breaking some traditional rules and practising new forms of conduct – not because they understood them to be better, but because the groups which acted on them prospered more than others and grew” (Hayek 1979: 161). This line of reasoning is also addressed in Hayek’s “Fatal Conceit”, suggesting that entrepreneurship is an indispensable factor in the evolution of the extended order of the market, based on the division of labour and far-reaching exchange relations beyond the confines of established communities:

“In any case, some individuals did tear away, or were released, from the hold and obligations of the small community, and began not only to settle to other communities, but also to lay the foundations for a network of connections with members of still other communities – a network that ultimately, in countless relays and ramifications, has covered the whole earth. Such individuals were enabled to contribute their shares, albeit unknowingly and unintentionally, towards the building of a more complex and extensive order – an order far beyond their own or their contemporaries’ purview” (Hayek 1988: 42).

In discussing this process, Hayek focuses on the correspondence between the transfer of goods and the transfer of knowledge, with trade based on the distinctive individual knowledge of the competing trading agents, then continuously promoting initiatives in discovering new opportunities. Innovations would turn to customs in the context of institutional conditions and distinct advantages that allow for an expansion of the innovative groups (Hayek 1988: 43).

These arguments also inform Hayek’s policy conclusions concerning the rejection of development planning and extensive public regulation, because modes of technological advance and the emergence of related social structures are not to be foreseen and controlled (Hayek 1978b: 188). Hayek claims that development planning would imply attempts to regulate and shape economic processes in a scientifically founded manner, related with a predictive anticipation of future developments that was typical for constructivism, denoting a belief in the design and engineering of the institutional and social order of a society at large (Hayek 1978a: 3n). In contrast to these types of development planning schemes, the relationship between competition and entrepreneurship should be held responsible for the dynamism of economic development, based on the institutional order of a particular economy under consideration.

Also in the context of that discussion of development policy, the perception of a pioneering minority that confronts a traditional majority resembles the Wieser-Schumpeter line of reasoning on the leadership qualities of pioneering individuals:

“This is that required changes in habits and customs will be brought about only if the few willing and able to experiment with new methods can make it necessary for the many to follow them, and at the same time to show them the way. The required discovery process will be impeded or prevented, if the many are able to keep the few to the traditional ways” (Hayek 1978b: 189).

Therefore, the implementation of an institutional order that is conducive to entrepreneurship, based on private property, would provide the most promising device for the formulation of development policies:

“The much lamented absence of a spirit of enterprise in many of the new countries is not an unalterable characteristic of the individual inhabitants, but the consequence of restraints which existing customs and institutions place upon them. This is why it would be fatal in such societies for the collective will to be allowed to direct the efforts of individuals, instead of governmental power being confined to protecting individuals against the pressures of society” (Hayek 1978b: 189n).

Again, it is evident that a reconsideration of the notion of entrepreneurship is of major importance for understanding the dynamism of economic development and the underlying processes of cultural evolution. Still, it remains noteworthy that Hayek pinpoints the role of institutions in articulating the entrepreneurial potential of the market process, whereas the behavioural dimension of entrepreneurship is not addressed as a decisive topic to be explored.

In assessing Hayek’s theory of cultural evolution, then, it has been pointed out that it comprises really of two sub-processes, namely the process of variation that generates novel variants of behaviour that are to be transmitted, and the process of selection which results in the selective establishment of specific regularities out of the pool of available variants of behaviour. Individualist arguments in Hayek’s theorising then point to the role of specific individuals, who act as innovators, for they deviate from established traditions by experimenting with new practices that may turn into regularities during competitive selection as they are adopted within groups and then spread all over the socio-economic system. However, as argued by Vanberg, this perspective lacks from well-defined individualist arguments, for it remains unclear whether it is behaviour advantageous to individuals or groups which prevails in the competitive process of cultural evolution (Vanberg 1994: 82n).

Moreover, apart from these aspects, it has been criticised that Hayek’s approach lacks from an adequate elaboration of evolutionary theory. In particular, Hodgson has proposed that Hayek fails to specify the process that leads to the adoption and routine operation of advantageous rules within a group; a lack of analytical rigour which is especially relevant with regard to the matter of organisations (Hodgson 1993: 171n). Accordingly, it seems that Hayek underestimates the extent to which evolutionary processes tend to require an institutional variety that allows for a plurality of market structures and other institutional forms of socio-economic interaction (Hodgson 1993: 176n). These considerations also resound in North’s recent critique at Hayek’s theory of cultural evolution. North actually claims that Hayek would emphasise the role of spontaneous order in a manner that neglects human intentionality and the deliberate structuration of human interaction in path dependent development processes (North 2005: 51-52).

In conclusion, these critical assessments are fit to highlight the specific role of the notion of entrepreneurship in Hayek’s theorising. After all, Hayek does not present a distinct theory of entrepreneurship with an elaborate apparatus of behavioural arguments. Instead, both his theory of the market process and the theory of cultural evolution focus on the coordinative impact of rules, which derive their functional importance from the subjectivity of knowledge as well as from the related complexity of evolving socio-economic systems. All of this is outlined in a mode of reasoning that approaches entrepreneurship in terms of a potential which does not require further analytical efforts. Indeed, the theoretical problems of Hayek’s theory of cultural evolution, as outlined above, may be related with that lack of analytical rigour in sorting out the behavioural foundations of entrepreneurship.

Still, entrepreneurship plays a major role in Hayek's approach, highlighting search, experimentation and discovery as crucial factors in the stimulation of economic change – which is identified as the constitutive problem of economic theory. Accordingly, entrepreneurship is viewed as the decisive force in the growth of civilisation, interpreted as a historical process that coincides with cultural evolution. In terms of the evolution of politics, indeed, Hayek subscribes to a conceptualisation of human agency that is well described by the notion of political entrepreneurship in the discovery of institutional innovations. The “rule-breaking” and “path-breaking” qualities of Hayekian entrepreneurship then combine segments of theorising that resemble Mises' theory of human action as well as Wieser's and Schumpeter's approaches to entrepreneurial leadership, although Hayek abstracts from an exploration of behavioural aspects in the carrying out of the entrepreneurial function. In this context, it is also noteworthy that Hayek, rather than discussing the introduction of novelty, emphasises the matter of imitation and dissemination, with entrepreneurship perceived as pioneering initiative in a comprehensive evolutionary process of gradual change. Based on these considerations, Hayek's theorising may serve as a point of departure for further research on the role of entrepreneurship in economic change, providing further insights for an analysis of the institutional foundations of cultural evolution.

5. Conclusion

The present essay has argued that Hayek's theory of cultural evolution is based on a conceptualisation of entrepreneurial activities which is constitutive for the underlying concept of institutional change, reflecting a specific constellation of search, discovery and innovation. All of these particular activities resemble the entrepreneurial function in the competitive procedures of the market process. Therefore it has been suggested that the matter of entrepreneurship provides Hayek's theory of cultural evolution with constitutive arguments on the interplay of individuals, groups and institutions in the evolutionary process of economic development. These aspects have been examined by taking the point of departure in the Austrian framework of theorising on entrepreneurship. Especially the contributions of Wieser and Mises proved to be influential with regard to Hayek's account of the entrepreneurial function in cultural evolution, pointing to the pioneering positions and knowledge qualities of entrepreneurship. In Hayek's theory of the market process, these arguments shape the characterisation of entrepreneurship in the search and discovery procedures that drive competition. Dealing with related aspects of entrepreneurship in the promotion of evolutionary change, Hayek's theory of cultural evolution then highlights rules, traditions and knowledge as parameters of entrepreneurial activities, for entrepreneurs are said to facilitate those institutional and structural changes which characterise the growth of modern civilisation. After all, it is this emphasis on the interaction of long-run rules and individual initiative in the context of a gradually extending order that characterises Hayek's approach to entrepreneurship as an unjustly neglected major contribution to modern Austrian theory. In this sense, despite analytical limitations regarding a stringent elaboration on behavioural aspects, Hayek's approach to entrepreneurship provides indispensable arguments for theorising on the market process and cultural evolution. Thus it represents a major effort in exploring the entrepreneurial dynamism of economic development.

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