

# The “Creative Destruction” in Economic and Political Institutions.

*Massimo Egidi*

Department of Economics  
University of Trento  
Via Inama, 1  
38100 TRENTO- Italy  
Tel: +39-461-882203  
Fax: +39-461-882222  
[megidi@risc1.gelso.unitn.it](mailto:megidi@risc1.gelso.unitn.it)

## 1. Why revisit the “Creative Destruction”.

One of the analytical advantages brought by transaction costs economics has been to provide a general framework within one can consider all economic organizations as displayed in a “space” of different contractual forms between the two extreme situations of pure markets and pure hierarchies. Even though this approach is still incomplete and characterized by unresolved problems<sup>1</sup>, it has consolidated the idea of considering market and hierarchical organizations to be alternative devices with which to coordinate economic activities. This idea originates from the debate on socialist planning to which during the 1930s Lange (among socialists) and Hayek (among Austrians) made the major contributions. The Austrian claims concerning the inefficiency of planning created a dilemma in the neo-classical camp because capitalistic business firm are basically planned organizations, and therefore large and giant firms should be expected to be poorly efficient. Coase’s notion of transaction costs can be considered a reply to the dilemma opened by the Austrian: in fact in his view planned organizations exist because the costs to coordinate the economic activities via markets are positive and can be higher than the costs to coordinate them via plans and orders.

Transaction costs are therefore introduced as the costs of “running the market”, and is suggested that the limit on the expansion of planned organizations is reached when the costs of organizing economic activity by orders within a plan become superior to the costs of organizing the same activity via transactions on the market. (the so-called of make-or-buy decision).

In its earlier versions, by consequence, transaction costs economics focused on vertical integration as the basic mechanism with which to explain the shift among different organizational forms. In current debate the perspective has widened: markets, firms and hybrid forms which characterize economic activity, are considered to be different “governance structures of transactions” (Williamson, 1981) and the differences among different forms are analysed by comparing the attributes of transactions with the features of the governance structures, and also the costs involved. Yet, even in this more sophisticated version, this

---

<sup>1</sup> See for example Demsetz (1991)

approach requires precise definition and operationalization of the concept of transaction costs: a task which, despite the large amount of theoretical and empirical work devoted to it, still has not been fully accomplished.<sup>2</sup>

One of the reasons for this difficulty seems to be an incomplete analysis of the nature of the human decisions involved in the make-or-buy choice: in fact, the contours of the areas of economic activities covered respectively by markets and by hierarchies depend on the outcome of decisions “rationally” taken by managers of the firm: but managerial decisions may have highly unintended consequences, because of the limits on the human rationality. Analysis of alternative possible lines of action and the computation of costs involved (whatever their definition) are normally largely incomplete, and this feature is amplified when decisions are innovative.

In consequence, since managerial activities display unintended effects in the long run, we cannot take it for granted that the level of transaction costs will perfectly discriminate between market and planned activities.

Therefore it is possible that an institution (market, hierarchical organization or hybrid) will remain locked in a highly sub-optimal configuration without the “spontaneous” rise of an alternative institution to render coordination more efficient. This suggests a vision of the economy which is somewhat more pessimistic, but also more realistic, than that entailed by full use of the transaction costs theory: this approach in fact implies that the distribution between economic activities undertaken respectively via markets and via planned organizations is optimal, thereby becoming philosophically close to Spinoza’s thesis that we live in the best of the possible worlds.

The suspicion that institutions are not perfectly self-regulating clashes with a long-standing tradition in economics. Since the parable of the Invisible Hand, the market has been depicted as a self-regulating institution, efficient by virtue of competition, which allows social benefits to be achieved despite individual egoism.

Smith’s evocative image fails to take account of the possibility of the long-run undesired effects of boundedly rational egoistic behaviour on economic institutions. Even though a glance at any historical example of the economic redistribution of wealth and resources confirms the existence of negative effects, only recently, with the rise of the theory of the adverse selection and market failure, has the myth of the market as a mechanism which always leads to optimal resource allocation been seriously challenged.

The idea of the possible failure and decadence of markets has been advanced in works by Arrow (1971) and Akerlof (1970). The former points out that in economic contexts characterised by systematic innovative (inventive) activity, conditions of the imperfect appropriability and appraisability of the new goods hold, and in consequence the market fails to achieve optimal resource allocation. Imperfect appraisability, as Akerlof showed, is also the key condition which can lead to the decline of a market and its disappearance.

The point is that the decline of the market, and eventually its disappearance, does not automatically lead to the rise of an alternative institution which enables the system to achieve optimality: Akerlof’s analysis suggests that the mechanism of competition, which is expected to select “virtuously” the most competent behaviours, may be superseded by a “vicious” mechanism of adverse selection which discourages the emergence of efficient and competent behaviours.

My contention is that if a contractual system does not allocate optimally, this does not imply that it will be possible for an alternative contractual system to emerge, consequently the economy may remain trapped in a highly sub-optimal condition.

---

<sup>2</sup> See Williamson (1991: pp. 90-116) and Demsetz (1991: pp. 159-178) in Williamson and Winter (1991).

To test the implications of this assumption the first step is to examine under what conditions the forces fostering or preventing the efficient working of market are active, and if they work in different institutional contexts. To do this we must establish whether it is possible to transfer the idea of the virtuous effect of competition from its natural environment, the market, to hierarchical systems. And secondly we must clarify whether the same holds for “adverse” mechanisms, i.e. whether corresponding to market failure mechanisms is some form of organizational failures within hierarchies.

We must first revisit the notion of competition, in order to clarify the conditions for the failure of its virtuous effects. How competition works, in fact, is not a fully agreed upon by the different schools of economic thought. The notion has been formulated in at least three different ways.

First we have the standard neo-classical description of competition as leading the economic system to equilibrium and allowing an optimal resource allocation.

Beyond this view, which addresses the question of computability, stability and Pareto optimality in conditions of perfect knowledge, a more subtle issue is raised by the Austrian approach to competition: that of the emergence of markets as institutions in conditions of dispersed and divided knowledge. Hayek attributed a quite different feature to competition than did standard neoclassical theory: namely its capacity to discover better ways to use economic resources by allowing the more competent and efficient behaviours to prevail.

A third description of competition is offered by the Schumpeter’s Creative Destruction. Even though couched in term very similar to the Austrians’, by emphasizing the emergence of innovative behaviours as individualistic, ‘heroic’ actions, Schumpeter suggested that also these behaviours could be standardized, that competition could consequently decline and be replaced by bureaucratic planned activity. For reasons I shall explore later, Schumpeter’s prophecy of an historical, long-run decline of market competition was not fulfilled; one reason for this failure being that, while he suggested that the incentives of market competition were destined to weaken, he assumed it as natural that bureaucratized organizations would be able to create a system of incentives more effective than the market’s: which historically did not happen.<sup>3</sup>

Although Schumpeter’s predictions have not been fulfilled, his analysis conducts important historical comparison of the relative performances of two economic institutions which sheds light on the possibility that competition can fail and market system can disappear.

For reasons which I will clarify later, Creative Destruction is not a simple extension of the Austrian’s view of competition as a virtuous mechanism; it also contains also the idea of *adverse selection*. Competition, in Shumpeter’s view, is primarily a process of the creation and diffusion of new knowledge within the economic system under conditions of rivalry; a process which has important re-allocative effects and, reinterpreted with current analytical tools, presumes conditions of market failure.

The argument set out in the following pages, therefore, is that this process works in an environment of market failures and externalities where Hayekian “virtuous” selection and adverse selection operate jointly in dynamic equilibrium.

Confirmation of this feature of Creative Destruction is provided by the theory of democracy expounded in the second part of Capitalism Socialism and Democracy. Schumpeter did not provide explicitly micro-foundations for his analysis of Creative

---

<sup>3</sup>He transposed to the long run and extended to the entire economic system what in capitalist economies happens as an everyday “local” and possibly temporary phenomenon: the reduction of competitive opportunities produced by the rise of vertical integration. But even though Schumpeter’s epochal predictions have not been fulfilled, his analysis contains in nuce some important elements with which to regard the shift from market to hierarchical organizations as resulting from the reallocation of resources in conditions of market failure.

Destruction, but most of the essential elements for a micro-foundation of human behaviour in economics and politics are contained in his theory of democracy.

This part of his analysis is in fact based on the idea of bounded rationality, cognitive inertia and the limited ability of humans to evaluate information relevant to political decisions: on the one hand these assumptions are crucial to Schumpeter's theory insofar they permit the representation of political institutions as based on delegation, trust and leadership; on the other, they are strikingly "Austrian" and easily extendible to economics. It is important to note that the assumption that human decisions are affected by limits in using rationality and processing information cannot be restricted to the context of political institutions; and in fact Schumpeter points out that the only difference between the nature of decisions in political and economic contexts is the extent of the knowledge base, i.e. the competence area of consumers and producers, which in economics is normally broader than in politics.

In his theory of democracy Schumpeter describes a process which in modern terms can be called as a process of *adverse selection in politics*, based on the assumption that bounded rationality, asymmetry of information and opportunism characterize human behaviour. As I have suggested, these three features are not specific to human behaviours in politics, but they are also valid in economic contexts. Therefore Schumpeter's theory of democracy and his theory of Creative Destruction can be regarded as based on an unified theoretical background. At the same time his theory of democracy allows us to explore to what extent the modern idea of adverse selection can be used beyond its original sphere of application, the economic theory of market failure, to describe organizational and political failures and to gain better understanding of the limits of hierarchical organizations.

Summing up, we started from the observation that if markets are trapped in a sub-optimal configuration, an alternative, more efficient way to coordinate economic activities will not necessarily emerge. One possible reason is that transaction costs are not fully computable, because of the unintended effects of economic decisions, and therefore a more efficient contractual set-up may fail to emerge. Instead of appealing to transaction costs, this paper suggests a different approach to the problem based on identification of the forces which lead to the rise and the fall of the different coordination devices. It explores the possibility of re-interpreting the meaning of the competition on the one hand, and that of adverse selection on the other, as selective mechanisms which give rise, respectively, to the prevalence of competent and loyal behaviours over the opportunistic ones, or vice-versa, in the markets and within hierarchical organizations. Schumpeter's theory of democracy and his theory of Creative Destruction can be used as benchmarks with which to verify the appropriateness of this approach and as a suitable basis for analysis of the rise and the fall of different organizational and contractual contexts.

The paper is organized follows way: the different features of competition are analyzed and compared, beginning with the debate on planning and socialism, in the first three sections. Then the possible extension of adverse selection to hierarchies, and its relation to Schumpeterian Creative Destruction are discussed (sections 4, 5, 6). In the last sections the Schumpeterian theory of democracy is revised in relation to adverse and virtuous political selection, and links are examined with Creative Destruction.

## 2. Walras-Barone: Competition as the Computability of equilibrium in Planned and Market Economies.

The debate on the feasibility of a collectivist planned economy began in the early years of this century with the appearance on the European political scene of parties inspired by

socialism as an ideology and a political Utopia. The problem was to answer to the question whether a socialist (collectivist) economic system based on the public ownership of the means of production and on planning could work.

The controversy in part took the form of a clash between the two rival economic camps of neoclassical theory and Marxian theory, but this contrast seemed to lose much of its relevance when it was claimed by Pareto first, and then definitively by Barone, that a planned economy can be treated with the analytical tools of general economic equilibrium theory, and in consequence that it was possible formally to prove the workability of a planned economy; that is, the viability of the 'pure logic of socialism' and particularly the existence of equilibrium in planned economies.

Barone employed the Walrasian model to give formal demonstration of the fact that equilibrium can exist in a planned economic system. However, he failed to show how this equilibrium could be computed in the absence of the market.<sup>4</sup>

His position therefore implicitly assumes that the distributed and unconscious computation of equilibrium performed in the markets by the 'invisible hand' can be replaced by calculation performed directly and consciously by some alternative institution within planned organizations; that is, by what we may call the 'Central Planning Office'.

This raises the question of whether a (presumably huge) bureaucracy can replace market mechanisms and perform the calculation required to establish the levels of supply and demand for all goods and services, by planning their production.

Transfer of the Walrasian model to the context of planning is not 'natural'. as it happens. Assuming that it is possible to prove the existence of an equilibrium in a planned economy with the same analytical tools that general equilibrium theory provides for market economies, is not clear what will substitute for competition mechanisms within planned economic systems, in relation to the degree of decentralisation of information, knowledge and computation, and the incentives system.

This issue - whether or not a planned system could be made to work - provoked heated debate in the neoclassical school. The Austrian branch of the marginalist school, Menger, in particular, argued that planning was theoretically impossible, and claimed that the Plan Office could never possess all the knowledge and information required to calculate artificially what the market calculated 'naturally' via price movements. In the opposite camp, O. Lange (1937) responded to the impossibility argument with a model of socialist planning based on decentralised decision-making which seemed to settle the question in favour of the socialist position (Keizer 1994). And, in fact, some years later in *Capitalism Socialism and Democracy*, Schumpeter argued that not only was an artificial calculation entirely feasible, but the introduction of an extensive bureaucracy (apart from the problem of the degree of centralization) would render it more straightforward than was the case in a market economy. It would eliminate the decisional uncertainty created in market systems by the existence of a large number of subjects deciding independently (for example, small entrepreneurs competing in the same industry) and reduce unpredictability in managerial decisions (Schumpeter, 1942: 175).

Hayek wrote a critical rejoinder to Schumpeter's position (Hayek, 1980: 90) in which he noted that Pareto himself, while suggesting that the problem of calculation was essentially the same in socialist and market economies, had sustained the practical impossibility of socialist calculation, due to the astronomically high number of equations that must be computed.

The point at issue here is that Hayek's polemic against the possibility of a planned system to work as a market economy was not based solely on the complexity of economic

---

<sup>4</sup> See Hayek (1980: 90, note 1) and more generally 'Socialist Calculation III: the Competitive "Solution"' (pp 181-208).

calculation; he contended that, since a planned system lacked competition, the incentives that would ensure its efficient functioning were absent.

‘To assume that it is possible to create conditions of full competition without making those who are responsible for the decisions pay for their mistakes seems to be pure illusion’ (Hayek 1980: 186).

The crucial point is therefore that Hayek viewed the role of competition very differently from Walras, and that he raised reasons for the inefficiency of planning (as defined by Barone) that were much more relevant than the question of calculation complexity.

### 3. Hayek: Competition as a virtuous mechanism of selection.

Walras’ model of competition as the equilibrium adjustment mechanism captured only some aspects of competition, a shortcoming of which the late-nineteenth-century economists were well aware. His model was contested by the Austrian school, which - mainly through Hayek - propounded a version of the notion of competition very different from the Walrasian one, by emphasizing two very different features of competition: selection and learning ones.

The Austrian school’s point of departure was a profound analysis of the nature of human reason and of its relationship with the social institutions; analysis which has no equivalent in Walrasian theory. Mises and Hayek stressed that human rationality and intelligence are characterized by strong cognitive limitations, and that individual knowledge is highly idiosyncratic. Individuals, they contended, develop skills, abilities and experience which are specific and personal; the role of the institutions is therefore to enable individuals with different skills and knowledge systems to interact, helping them to accomplish tasks which they would otherwise find impossible.

Hayek criticised the economists of the Walrasian school because they took for granted what should instead be explained. They considered, that is, secondary importance, the problem of knowledge of by assuming relevant information and knowledge as available to everybody.

‘Clearly there is here a problem of *division of knowledge* which is quite analogous to, and at least as important as, the problem of the division of labour. But, while the latter has been one of the main subjects of investigation ever since the beginning of our science, the former has been as completely neglected, although it seems to me the really central problem of economics as a social science. The problem which we pretend to solve is how the spontaneous interaction of a number of people, each possessing only bits of knowledge, brings about a state of affairs in which prices correspond to costs, etc., and which could be brought about by deliberate decision only by somebody who possessed the combined knowledge of all those individuals. Experience shows us that something of this sort does happen, since the empirical observation that prices do tend to correspond to costs was the beginning of our science. But in our analysis, instead of showing what bits of information the different persons must possess in order to bring about that result, we fall in effect back on the assumption that everybody knows everything and so evade any real solution of the problem.’ (Hayek, 1980: 50-1).

Since knowledge is idiosyncratic and personal, a key problem is determining how individuals discover the ‘relevant information’. Hayek argued that it is not necessary for producers to conduct an exhaustive search for the knowledge they require, because the economic system provides signals which induce them only to seek the relevant knowledge.

These signals are emitted by markets and are transmitted through prices. What markets do is to signal, through variations in costs and prices, the existence of inefficiencies within the economic system. This image of competition seems tailored to capture processes of distributed micro-innovation and innovation diffusion. If, for example, a group of innovators reduces the price of a certain good because they are able to produce it more efficiently, this price modification provides other producers with a very clear signal, and exerts strong pressure on them to adjust rapidly to the new mode of production.

This is therefore a view - one shared by all the Austrians - which regards competition as a form of natural selection from which the best technologies, behaviours and organizational forms emerge.

#### 4. Schumpeter: Competition as Creative Destruction.

Schumpeter extended the Austrian argument to include the problem of the division of knowledge within the economy, and suggesting a model which combined selection and innovation. He argued that the engine of the (cyclical) process of development is the innovative activity undertaken by entrepreneurs when economic conditions are favourable (the low interest rates and low production factor costs which characterize depressions). Successful innovation activity reduces the costs and prices of goods and hence obliges all producers to adjust rapidly. Otherwise they are negatively selected and forced out of the market.

In his view too, economic development proceeds through a sequence of innovation-imitation in which competition acts selectively. This Schumpeter called the process of Creative Destruction:

‘Economists are at long last emerging from the stage in which price competition was all they saw. As soon as quality competition and sales effort are admitted in the sacred precincts of theory, the price variable is ousted from its dominant position. However, it is still competition within a rigid pattern of invariant conditions, method of production and forms of industrial organization in particular, that practically monopolizes attention. But in capitalistic reality as distinguished from its textbook picture, it is not the kind of competition which counts but the competition for the new commodity, the new technology, the new source of supply, the new type of organization (the largest-scale unit of control for instance) - competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms, but at their foundations and at their very lives.’ (Schumpeter, 1942: 85)

This position reverses the order of the Walrasian account. The convergence of prices to levels which ensure equilibrium between supply and demand - the central component of Walras’ theory - is regarded as of secondary importance. The main problem, Schumpeter contends, is that of competition as a selective procedure which singles out the best mode of production.

So, even if declaredly a great admirer of Walras’ general equilibrium approach, Schumpeter fully incorporated into his theory the competition features focused upon by the Austrians: learning (innovation), selection and (profit) incentives play a fundamental role in the picture. What was not clear in Hayek’s vision, namely the fact that competition does not lead to (static) optimal resource allocation, but to a dynamic re-allocation of resources, becomes evident in Schumpeter’s analysis: he views competition as giving rise to the continuous redistribution of resources and wealth among individuals, expelling those found to be unfit from the market. Competition creates and destroys fortunes, jobs and wealth, and therefore is the fundamental source of the rise and decline of economic institutions.

In contrast to this clear statement of competition's features within markets, Schumpeter did not attribute any particular importance to the existence of similar features within bureaucratic organizations. Unfortunately, this is one of the central points for comparison between the performances of market and planned organizations - and ultimately with which to respond to the historical debate with which we started: whether a collectivist economic system, in which competition has been eliminated and replaced by planning, can achieve the same performance and the same results as a market economy.

Central here are the two functions of competition: market clearing, the function stressed by the Walrasian school, and that of incentivizing producers to be as efficient as possible, the Austrian school's thesis. If the price mechanism is replaced by a hierarchical command system by means of which bureaucrats implement their centralized plan, what happens to the two functions fulfilled by competition in markets?

Regarding the first function, that of market clearing, Schumpeter asserts that it is highly likely that bureaucrats can perform the calculations required for planning, thereby substituting for the perfect competition mechanism and proving in practice that it can be done. He paid scant attention to competition's second function, that of producing a system of incentives able to reduce opportunistic behaviour; or at least he assumes that a change of mental habits would be possible in bourgeois environment which generated symbolic incentives (like the rewards and honours in the army) able to produce efficiency within a bureaucracy in the same way that economic incentives do in market economies.

## 5. Adverse selection, virtuous selection: is market a self-repairing institution?

According to the Austrian school, it was competition that gave efficiency to the economic system through a process of selection. What seems to have escaped their analysis are the limits of competition, and the consequences which arise when competition fails to have beneficial effects. This happens, as adverse selection and moral hazard analysis illustrate, when the appropriability and appraisability of assets and goods traded does not hold.

**Appraisability:** to be certain that a new good satisfies their requirements, purchasers must be able to evaluate its possible uses. But this they can only do once they have purchased the good. This entails that purchasers are unable to know the uses of, and therefore to attribute a value to, the good that they buy, except *ex post*. Moreover, appraisability requires competence, which is not uniformly distributed among consumers. This is particularly evident with innovations and inventions, which, like all goods containing knowledge, are not perfectly appraisable.

**Appropriability:** a good is said to be appropriable when it is possible to make exclusive use of it.

The reasons why inventions are largely non-appropriable rest on the particular features of knowledge as a good: despite the division of labour, there is a broad overlapping of knowledge and competences among producers in the same industry. They all share a common knowledge-base, which makes it possible to imitate inventions, by reproducing them, without incurring all the costs of research and development that the first inventor has to sustain.

The weakness or absence of these two characteristics - appropriability and appraisability - may markedly reduce the size of the market of inventions (Arrow, 1983). As a consequence, resources may be allocated non-optimally and the economic system may grow at a rate less than its potential.

Inappropriability and non-valuability are key factors in enabling selection to function in an either favourable or adverse manner. The reasons for this I now examine.



If we assume that the appraisability of a good is imperfect, the buyer may be 'sold a lemon' by the seller, who may assure him that the good possesses the desired qualities although this is not actually the case. Opportunistic behaviour arises which may discourage or prevent the transaction. The certainty that the good's declared qualities correspond to its actual ones is only guaranteed by the fact that there exist endogenous conditions which incentivate producers not to behave opportunistically. These conditions have been highlighted by game theory: if the two parties to a contract expect the exchange to be repeated in the future, for a large number of times which are not known a priori, each of them will be incentivated to behave correctly, thereby acquiring a good reputation.

In this case it becomes convenient to keep to agreements; otherwise it is always possible that those who have been dissatisfied with their partner's behaviour will turn to a more able and more honest one. Hence Hayekian competition is effective in the case of 'large numbers' and low barriers to entry in which the selection process favours the best.

When this does not happen, opportunistic behaviour may appear and as consequence a process of adverse selection may arise. In examination of how virtuous Hayekian and adverse selection are interrelated, I cite, as a celebrated example, Akerlof's analysis (1970) of the market for lemons.

Let us suppose that there is a used-car market in which every individual seller wishes to sell his car privately. In order to evaluate the quality of the good correctly, the buyer must consult an expert mechanic, and therefore sustain what may be high costs. The buyer may have to pay for the mechanic's expertise several times before he finds a car of good quality. This means that the average cost to be borne in finding the desired car may exceed the difference between the value of a well-maintained car and the value of one in an average state of repair; and this is a cost which no buyer is willing to sustain. Consequently, since the buyer is uncertain of the quality of the good, he tends to value it cautiously and offers a price appropriate to an average-quality car, although the car is actually of good quality. The dealer offering the best good, i.e. the well-maintained car, is discouraged because he is unable to obtain a price that matches the quality of the good. This is therefore a process of adverse selection in which the best commodities are forced out of the market and the more able producers are disincentivated.

A 'negative externality' effect also arises. If, despite everything, the sellers of good-quality cars remain in the market, resources are redistributed in favour of sellers of 'lemons', because they are able to earn more than the real value of the good, while the honest dealers earn less than this value. This is therefore a process of adverse selection which eliminates the good 'well-maintained car'. There is consequently a strong incentive against the habit of maintaining one's car in good condition.

What, then, are the conditions which give rise to adverse selection, and those which lead to Hayekian selection?

The key point in the above example is the possibility that the less well-informed parties to the contract may correctly evaluate, directly or indirectly, the quality of the good that interests them, and at reasonable cost.

If, in the market described above, in which one private individual sells to another, there appears a dealer who manages to build up a large clientele by providing car appraisals backed by guarantees, this sets up a virtuous circle again. Knowing that buyers are willing to pay an above-average price for good-quality cars, and that this quality can be guaranteed by a reputable dealer, car-owners are once again incentivated to keep their cars in good condition. The dealer in this case is an innovative entrepreneur, who may assume the costs of hiring an expert mechanic to appraise cars because he divides these costs among a large number of cars bought and sold. This the private buyer is unable to do.

Note that a new institutional figure - namely the dealer - is required in order to restore the virtuous mechanism of favourable selection which the market alone could not guarantee. This figure arises 'spontaneously' because the conditions are right for him to do so. In fact, adverse selection prevails over favourable selection because of the high cost of appraising goods. The trader's solution is to distribute these costs among a large number of goods sold.

The question therefore becomes the following: is it always possible for institutions 'spontaneously' to arise - which permit Hayekian competition to exert its virtuous effect - or are there situations in which the forces of competition are unable to accomplish their favourable effect and the economic system remains trapped in a sub-optimal configuration?

The case of the market for inventions examined by Arrow provides an outstanding example of a situation in which the market is unable to self-regulate itself through the 'spontaneous' emergence of the institutions necessary to ensure its efficient functioning.

In contrast to Akerlof's example, in this case it is impossible for a new institutional figure to emerge spontaneously; a new agent able to resolve the problem created by the failure of the market for inventions. Let us imagine that a private individual, an agent, assumes the task of selling inventions; to do this, he must defend the interests of inventors and purchasers. However, although he can protect purchasers by guaranteeing the quality of the invention that they buy, he cannot with the same means protect the inventors. In fact, he cannot prevent the onset of opportunistic behaviour - that is, the appearance of copiers or imitators - unless he decides to resort to coercive measures against imitators. For this to happen, every individual must be able to enforce respect for agreements by the private use of violence; only in this case can agents spontaneously arise to protect inventors against violations, by means of a private police system, mercenaries or the like. However, the fact that it is possible to make private use of violence in order to enforce agreements implies that there is the possibility to use private violence to enforce any kind of right: by consequence there does not exist a system of universally shared and accepted laws protecting rights by means of a legitimate Central Government with the monopoly of coercive measures. Hayekian competition may therefore function to its fullest extent only in the absence of a legitimate monopoly of violence able to enforce a set of universally accepted human rights.

Therefore, if there exists a Central Government which is the legitimate monopoly-holder of violence, and which is assigned the role of enforcing respect for the rules ensuring that markets function (all the rules, not just those which concern respect for commitments undertaken in relation to exchange but also those protecting property rights), this means that there are breaches of the rules of the market which are not corrected by Hayekian competition. The market is therefore not a self-enforcing institution able autonomously to generate all the forces necessary for its efficient functioning.

This is especially apparent in the defence of property rights of assets and goods which are only partially appropriable or valuable, and in particular inventions. In order to protect inventors, the guarantee of an authority external to the market, namely, the state, is required. The patents office is an economic institution whose existence rests on a force external to the market: the guarantee offered by the state that it will enforce the law. Its failure to do so will allow opportunism and adverse selection to prevail, thereby severely restricting the size of the inventions market.

## 6. The Creative Destruction and missing market.

I have stressed the phenomenon of market failures, and in particular of situations in which, because competition cannot operate virtuously, some markets disappear and the market system is therefore unable to allocate resources optimally.

Interestingly, this phenomenon arises within the process of Creative Destruction. In fact, as this process unfolds, the innovations market is not created to its fullest extent. In Schumpeter's description, after the success of the first inventors, a swarm of imitators arises to diffuse innovations throughout the system. There is nothing to say that these imitators will purchase patents from the innovators; indeed, opportunistic behaviour will predominate because most innovations cannot be easily protected. This gives rise to the transfer of unpaid-for resources from the innovators to the imitators. The cyclical process of development is therefore highly sub-optimal, because it cannot ensure full recompense for innovators. Nevertheless, sub-optimal recompense is sufficient to trigger the process and to finance the growth of innovative firms. Here, favourable selection and adverse selection operate simultaneously, and the former dynamically prevails over the latter.

Creative Destruction is a virtuous process of competition because it improves the economy by enabling the best modes of production, the best working practices, etc., to emerge. But innovators are discouraged by the difficulty of protecting the results of their efforts, and by the impossibility of earning long-term profits from their innovations. If they were able to prevent their rivals from gaining access to their innovations, they could secure a permanent source of profits (technically, a rent) for themselves. But this privileged situation might become permanent, thereby eliminating the key element of competition.

In competitive capitalism, innovators are only temporarily successful in this endeavour: when innovations are first introduced, innovators are monopolists, because they are sole possessors of the innovation, but they are unable to prevent entry to the sector by imitators and hence the resurgence of competition.

The outcome is therefore the paradoxical situation in which the easier it is for a swarm of imitators to appropriate the secrets of innovators without paying for them in full, the less costly becomes entry to the market and therefore the larger the number of competitors. This enables competition to deliver its beneficial effects: the diffusion of the innovation and the consequent improvement in the quality or price of goods.

Schumpeterian competition operates so rapidly and effectively precisely because there exists a situation in which opportunistic behaviour can arise. However, such behaviour cannot exceed certain limits, for if innovators are unable to earn sufficient profits from their efforts, they are subject to a process of adverse selection which, by discouraging them, progressively reduces the size of the innovations market.

To conclude: the market of innovations cannot develop as a self-regulated institution because is governed by an unstable dynamic relationship between the two processes of virtuous and adverse selection. Therefore if we move out of the comparative static context and assume evolutionary conditions, i.e. if we assume, as the natural environment of our discussion, Hayekian-Schumpeterian conditions in which the most important way to recreate profits and re-allocate resources is the distributed creation of new knowledge, we must recognize that the dynamic relationship between virtuous and adverse selection characterizes all innovative economies. From this viewpoint, asset specificity helps to explain the preference for long-term contractual forms when a new innovative project has to be realized: new firms created to realize innovative investments allow the growth of internal competences in a network of idiosyncratic knowledge, without requiring the full appraisability and valuability of the individual contributions to growth of common knowledge.

## 7. Virtuous and adverse selection within hierarchical organizations.

I have outlined some features and limits of the idea of innovation as a distributed process of creation and diffusion of knowledge via markets characterized by Creative Destruction. These limits suggest that a similar process (the creation and diffusion of knowledge) may occur within firms, perhaps in a more efficient way.

A pre-condition for examination for the possible extension of the Creative Destruction mechanisms within organizations, is to provide a definition of competition - which is a typical feature of the firms in the market - also within firms. To phrase the matter in different terms, we must establish whether if the rivalry among individuals that typifies their unconscious and unplanned cooperation behaviour in the market still survives when individuals consciously cooperate within the same firm.

The contractual approach helps us answer to this problem. Relationships among firms are regulated and limited by contracts which restrict the rights of individuals and their range. Williamson's fundamental transformation is a very clear and vivid illustration of this phenomenon: consider the situation that arises when several firms enter a joint agreement to develop different parts of an innovative project. In this case, long-term joint investments are established and constitute sunk costs which prevent the partners from breaking the contractual relationship. The more the joint relationship among partners is improved by the creation of complementary competences, the more difficult it becomes for rival competitors to enter the relationship and substitute for pre-existing partners. The same happens within large firms: the more workers, employees and managers develops idiosyncratic competences within the internal knowledge network of the organization, the more difficult it becomes for external competitors to substitute them.

Therefore we may suggest that to 'residual rights', - i.e. to the power of decisions not involved in the contractual relationship - it corresponds a 'residual power of competition'.<sup>5</sup>

It follows that as assets specificity increases - within organizations or among firms involved in a lock-in process - so 'residual rights to compete' become increasingly restricted. In the extreme case, in a pure theoretical world of complete long-term contracts, we will arrive at a null competitive power because the vertical relationship is entirely reduced to bilateral monopolies. But this limiting case presumes full knowledge and unlimited computational power (to calculate rationally all contingencies of the contracts).

Therefore, assuming a context of bounded rationality, we can say that to whatever extent vertical relationships are strengthened, some residual rights to compete still remain. This suggests that the features of the competitive process, which constitute the regulatory mechanism of the market, can be transferred from their 'natural' environment to the opposite economic contexts, the firm, and used to explain of the mechanisms governing large bureaucratic organizations. In fact rivalry among individuals within economic organizations, is regulated by an internal system of incentives which are (deliberately or unconsciously) designed to support the working of an internal competition. What I shall maintain in the next pages is therefore that competition within organizations and competition across markets are basically the same phenomenon, i.e. two different ways of converting rivalry into 'virtuous' economic effects. Yet these effects differ between the two institutions because of the large difference in their abilities to compensate people are damaged by the reallocative effects of shirking and innovation.

---

<sup>5</sup>See Hart, in Williamson and Winter S.G. (1991).

The foregoing discussion suggests that if we represent the market realistically, i.e. as device for realizing plans and projects in a distributed way <sup>6</sup>, we can compare the two ways to innovate - the distributed and the centralized - in terms of the relative advantages that competition and adverse selections bring about in the different contexts.

A crucial point is the limits on the efficiency of planned systems in realizing projectual activities. Projecting is in fact essentially a high-level problem solving activity, which normally require a top-down process of division of labour and delegation, and for this reason it is highly conjectural and uncertain. It therefore can be realized only if it is complemented by a bottom-up distributed micro-innovative activity, i.e. by the 'local' activity of adaptation and micro-innovation activated by the individuals cooperating in the realization of the project.

In his pessimistic description of the declining opportunities for the bourgeoisie, Schumpeter attributed major importance to technological innovations by downgrading organizational adaptive innovations and imagining a future in which almost all innovative activity would be conducted in large laboratories within great planned firms.

Schumpeter omitted to take serious account of organizational innovations because his image of entrepreneurial activity was essentially that of an individualistic 'heroic action'; not a distributed and competitive projecting activity. Innovation is a necessarily diffused process because of the distributed nature of knowledge creation, and organizational micro-innovations are the normal by-product of everyday activity within organizations. The division of knowledge, as Hayek stressed, is a phenomenon which derives inevitably from the limits of human intelligence and rationality; and it is precisely these limits which make full prediction and planning of discoveries and inventions impossible. Hence it follows that neither can opportunities to innovate be fully controlled by a centralized system, nor can their development be fully planned.

These limits on centralized planning reduce the advantages of great hierarchically-planned firms over networks of small firms, from the point of view of their capacity to react to change and to external challenges. This helps explain why Schumpeter's prophecy has not been fulfilled, taking into account the cognitive aspects of economic organizations.

A complementary explanation requires consideration, one based on the observation that adverse selection can also operate within organizations.

Schumpeter underestimated the fact that when planning replaces the market, the place of the Creative Destruction he envisaged as the fundamental mechanism in the competitive struggle among firms in the market is not replaced by a selective process operating with equally brutal efficiency within organizations, by incentivating managers and bureaucrats to direct their action efficiently and creatively towards achievement of the organization's goals.

If we accept that the relationships within a large economic organization are regulated by internal competition, we must admit not only that a conflict of interests may arise among individuals but also, as Marris (1972, 1980) suggests, that the interests of a hierarchy of managers, bureaucrats and office-workers do not normally coincide with the interests of the owners, nor with those of the shareholders.

If competition operated efficiently, the managers of a large firm would introduce appropriate organizational innovations, change procedures, methods and organizational rules, promote the most able workers up the hierarchy to achieve unanimously shared goals. But any 'efficient' restructuring of the organizational set-up may alter the internal distribution of resources and power, by reducing managerial attributes and their discretionary power.

---

<sup>6</sup>A important implication of this statement is that prices are signals not sufficient to coordinate the plans of different firms; a transfer of knowledge and information among them is normally needed.

There therefore may be strong resistance within a bureaucratized large firm against the rapid redefinition of its managers' roles and against change to the organizational procedures involved. This resistance may be viewed as one of the principal sources of inefficiency in large organizations, and interpreted in terms of the adverse selection mechanism. Following Hirschman (1970) and Simon (1991), loyalty is a fundamental element in the improvement of organizational compactness. Opportunism is not a 'natural' trait of human behaviour uniformly shared by individuals; it is a habit which can be reinforced or discouraged by the working of the institutions themselves. One way of discouraging opportunistic behaviour is to improve loyalty, which can be done by creating incentives within hierarchical systems, for example by guaranteeing career prospects and rewarding competent behaviour. But if individuals, employees and managers, are to be rewarded by a mechanism of competitive selection within an organization, their ability and fitness must be evaluated and controlled by able superiors; and evaluation and filtering are effective only if they are performed by an authority which is 'accepted' by inferiors in the hierarchy, in the sense that they recognize the competence of the superiors. To some extent within hierarchy it operates a bottom up control, insofar inferiors evaluate the appropriateness of superior's decisions and commands. This happens mainly when cognitive and reallocative conflicts arise from any internal innovation - even the micro innovation during the everyday adaptive activity. Conflicting opinions must find a room: the "voice" (Hirschman) allow the most competent opinion to emerge. The parts can better recognise the reciprocal competence, if it is the case, by using the voice, and by consequence their decisions reinforce loyalty and identification. Only on this basis - the possibility to exert the voice option - conflicts of opinions and of interests can be resolved with the prevalence of the most competent position and can loyalty overcome opportunism. If on the contrary voice cannot receive attention, loyalty is not sufficiently improved, and the virtuous effects of competition can be overwhelmed by a mechanism of adverse selection, which can lead the organization toward a very sub-optimal "order" characterized by a strongly authoritarian and scarcely competent hierarchy (Egidi, 1994). This kind of explanation was not considered in Schumpeter's discussion of features of planned economies: but, if transferred to a different context, the political one, largely fits with Schumpeterian analysis of democracy.

#### 8. Cognitive foundations of Creative Destruction: leadership and manipulation of preferences.

I argued at the outset that one of the most important features of the theory of Creative Destruction is that it can be transferred from analysis of the economic institutions to that of the political institutions. Schumpeter accomplished this transfer by revising - in a manner as radical as it was surreptitious - the neoclassical theory of decision-making and of the formation of supply and demand.

Mainstream microeconomics views the formation of supply and demand as the effect of the rational behaviour of perfectly informed and independent economic agents. No explicit hypotheses are formulated on the costs that sellers and buyers must sustain in order to acquire information. Without specifying who must pay information costs, it is assumed that consumers possess a complete picture of the goods available and that, moreover, they are able to evaluate their uses in a perfectly competent manner.

How do consumers react in an environment with a constant stream of innovations, and in which they are confronted by goods whose features they can only imperfectly know? The answer provided by the standard analyses of comparative statics is the following: as new

goods enter the market, consumers develop new preference structures which were entirely unknown to them before these new goods appeared; on the basis of these new preferences, certain of these new goods are selected and are successful. It is not deemed important to study how new preferences are formed, the assumption being that it is a transitory and costless process.

In reality, and in the Schumpeterian account, matters are rather different. Consumers possess neither complete information nor sufficient knowledge for perfectly competent decision-making. And nor do they individually possess sufficient resources with which to conduct exhaustive research on existing goods and their quality, and thereby mitigate their ignorance.

This is a typical case of appraisal difficulty which exposes buyers to the risk of opportunistic behaviour. The price system is unable to transmit sufficient signals for consumers to be able to orient their choice (a consumer will not purchase a good offered by a producer at a lower-than-normal price unless he is able to ascertain that the quality of that good is at least equal to that of its competitor goods). Producers and consumers must therefore directly exchange the information about goods that the price system is unable to furnish.

For reasons that I shall not examine here, in the real world there do not normally exist sufficient sources (newspapers, magazines, catalogues, etc.) of information which enable complete and detailed assessment of quality. That is to say, the market system is unable to generate internally to itself - unlike the used-car market - a new market, that of information about goods. Essentially, the emergence of this market is prevented by (a) the difficulties faced by experts in evaluating new goods, since they are ignorant of innovations which are protected by patent or may even be secret; (b) the fact that, whereas competition among sellers is virtuous, because it forces them to improve their expertise in sectors in which they are already specialists, to be 'experts' buyers must be knowledgeable about the whole range of goods on offer. Consequently, there cannot exist that powerful mechanism of competition which obliges consumers to conduct ever more accurate appraisals of the goods that they purchase. This is because, given the limited nature of their knowledge, they would have to undertake processes of learning and information-gathering on an enormous scale. Consumers are therefore forced to delegate appraisal to experts, to opinion leaders, or simply to rely on the word of the seller.

The crucial point is that consumers lack not only information but also expertise. They are therefore obliged to accept external and 'pre-packaged' judgements and evaluations. This is the most insidious aspect of delegation, because it induces consumers to accept and internalize judgements and evaluations which have not been objectively elaborated and tested. The word "persuasion", indeed, signifies inducing others to accept one's assessments, and in an innovative context this means that the seller of a new good will seek to impose assessment criteria on potential buyers which work in his favour.

The massive growth of the advertising sector in the course of this century clearly testifies to the crucial nature of information and of the persuasion of consumers by producers. Schumpeter highlights this phenomenon in the second part of *Capitalism, Socialism and Democracy*. He points out that advertising does not merely convey information to a public perfectly able to discriminate and choose; it is intended to persuade. Firms do not restrict themselves to providing information. They augment their knowledge of the real or potential needs of consumers by conducting market surveys so that they can induce them to buy their products.

Contrary to the neoclassical model, in which supply and demand are formed entirely independently of each other, in Schumpeter's view, therefore, the formation of demand is influenced by the mechanisms of persuasion deployed by producers. Although consumers

possess decision-making autonomy, it is restricted by the persuasive action of firms, which are able to orient buyers' choices by focusing their attention on specific products and by exaggerating their qualities.

Schumpeter adopted a cautious position regarding the autonomy of the consumer; nevertheless it was a position directly at odds with traditional theory. He advanced the hypothesis that the cognitive and decisional autonomy of consumers is limited, and that its 'range of action' depends on the opportunities available to them to appraise the quality of goods directly, on their familiarity with the goods that they intend to purchase. This provided Schumpeter with the link between his analyses of economic choice and of political choice. As we shall see, whereas he attributed a substantial amount of autonomy to consumers, given that they can personally and directly appraise the quality of goods, he attributed much less autonomy to electors when they must decide which party or candidate to support.

In making this assertion, Schumpeter anticipated many of the conclusions reached thirty years later by cognitive psychology in its analysis of consumer behaviour. Empirical studies of consumption and decisions under conditions of uncertainty show that bounded rationality, attention focusing, cognitive frame dependence (see in general the works of Kahnemann and Tversky) play a systematic and crucial role in the formation of preferences. This provides strong a posteriori confirmation of the validity of Schumpeter's theory.

However, in the 1940s, economists were entirely unaware of this line of analysis. The gulf between the experimental psychological study of consumer behaviour and the economic theory of consumption decisions was (except in the works of Katona) total. Schumpeter's analysis was therefore interpreted solely as an attempt to introduce realism into the description of economic facts, and its powerful innovative potential in the theoretical field was ignored.

With the recent development of the theory of bounded rationality (Herbert Simon), and the consequent intellectual alliance between cognitive sciences, psychology and economics, it is now clear that Schumpeter's assumptions can be used to conduct a radical revision of the theory of consumption. If one assumes, in fact, that individuals act on the basis of limited rationality and competences, the consequence is that the formation of consumer choices and preferences is affected by external agents which provide or suggest the criteria for assessment: the expert, the opinion leader, or the producer exert a decisive influence on the collective formation of new systems of opinions and therefore of preferences.

I do not consider this phenomenon - the fact that it is possible to create new needs "artificially", to "manipulate" consumer preferences - as intrinsically negative, for it is the inevitable consequence of the cognitive and rational limitations of human beings. All needs, with the exception of the most basic primary ones, are eminently cultural in nature (anthropological in the broad sense), and the incessant creation of new needs by competitive capitalism has undeniably increased the sum of human well-being. The fact that needs are 'artificially' created and re-created has therefore had both positive and negative consequences for economic and civil progress. It all depends, of course, on the institutional framework within which the phenomenon unfolds, and of the level of awareness of those involved. One may choose to accept the assessments proposed by others; but this choice is freer, the more it is based on knowledge and awareness. This is the key component of Hirschman's (1984) analysis of changes in preferences.

Hirschman draws on the approach developed by the philosopher Harry Frankfurt to distinguish between 'wanton' and non-wanton' changes in preferences. The former are simple, random and induced by fashion; the latter are deliberate, complex and the outcome of an often arduous process of introspection ('wanton', Hirschman reminds us, means 'frivolous', 'vacuous' but also 'unpremeditated'). He proposes that the capacities attributed to an economic agent should also include an ability to make non-wanton choices; that is, the ability



to reflect on previous choices and, if necessary, change the criteria on the basis of which these choices were made.

The problem is establishing whether there are elements endogenous to the market which induce consumers to make non-wanton choices; that is, whether there are forces which prompt consumers to make competent and informed choices, although most appraisals must nonetheless be delegated because of the rational and cognitive limitations of human beings.

Now, it is a commonplace experience that this is not what actually happens: systematic rivalry exists among competing firms. Firms do not have a common interest which induces them faithfully and impartially to inform consumers about the characteristics of their new products; on the contrary, it is in their interest to advertise their products and to persuade consumers that they are better than those of their competitors.

Accordingly, and given the “cognitive laziness” of the mass of consumers, advertising techniques manipulate the unconscious and irrational elements that determine consumer choices. The advertiser who based his campaign on the rationality of choice and on the transparency and completeness of information would encounter serious problems with his client, and, by subjecting the consumer to high cognitive overload, he would probably fail to sell the product.

The crucial point is that producers have no interest in providing consumers with the means to make a free, informed and conscious choice. On the contrary, the knowledge that a choice is ‘wanton’ substantially reduces the producer’s uncertainty, because in this case the choice is subject to advertising and fashion, and therefore to a certain amount of control and influence exercised by the producer himself. This is exactly the opposite of what should be guaranteed to the consumer, namely the provision of every incentive to choose with the maximum amount of knowledge and competence.

This phenomenon is a very subtle form of market failure. The market is blind, in the sense that it does not possess the power to force consumers to adopt entirely rational behaviour, to undertake ‘virtuous’ competition similar to the competition among producers. This may set a trap for the economic system as a whole, which becomes unable to force its components to express their needs and interests with a high degree of rationality.

This phenomenon is driven by an element closely associated with the difficulty of appraisal analysed by Arrow: namely the fact that the transfer and modification of preferences is largely the result of exogenous factors. Schumpeter was fully aware of the great significance of this phenomenon - which lies at the basis of delegation mechanisms and therefore of the emergence of leadership - but, as we have seen, he believed it to be of limited importance in the economic field. By contrast, he argued that this phenomenon had a crucial impact in the political arena.<sup>7</sup>

## 9. Democracy and Competition.

The above discussion of the limits of competition links directly with the last part of *Capitalism, Socialism and Democracy*, which contains what was certainly Schumpeter’s most innovative contribution to the history of thought. The aim of this section is not to conduct a critical reading of Schumpeter’s views on democracy, but, more simply, to show how his original conception of human economic behaviour was naturally extended, in this part of his book, to social and political behaviour.

---

<sup>7</sup>See his brilliant exposition of the problem in Schumpeter 1942: 242-51.

Schumpeter suggests that the struggle for power is a process entirely analogous with the competition for profit. Democracy is therefore a system of rules ensuring that the contest for power takes the peaceful form of the political election.

This analogy between market and democracy holds true because Schumpeter developed a set of postulates which enable political and economic behaviour to be treated in unitary fashion.

Schumpeter's analysis was based on the following three principles: (i) the limited ability of individuals to reflect, to form independent opinions and to decide (an assumption of 'Austrian' stamp, which was given its first thorough formulation in the modern theory of bounded rationality); (ii) the fact that evaluation of goods requires knowledge and expertise; (iii) the principle of delegation, which enables leaders to rise to power. Let us examine the connections among these three principles.

Human cognitive difficulties and bounded rationality are of especial significance when one moves from the economic sphere to the world of politics.

'However, when we move still further away from the private concerns of the family and the business office into those regions of national and international affairs that lack a direct and unmistakable link with those private concerns, individual volition, command of facts and method of inference soon cease to fulfil the requirements of the classical doctrine. What strikes me most of all and seems to me to be the core of the trouble is the fact that the sense of reality is so completely lost. [.....]

Thus the typical citizen drops down to a lower level of mental performance as soon as he enters the political field. He argues and analyzes in a way which he would readily recognize as infantile within the sphere of his real interests. He becomes a primitive again. His thinking becomes associative and affective.' (page 260 and 261).

The phenomena of advertising and fashion, which as we have seen subtly pervade the economic system, find their maximum expression in politics. They are phenomena which render the criteria and motives for decision-making even less transparent, when they instead require rationality and expertise, and subject the citizen to the decisive influence of political groups and parties. These latter create opinions and ideas with which they persuade citizens to change their attitudes and criteria of choice.

'The only point that matters here is that, Human Nature in Politics being what is, they are able to fashion and, within very wide limits, even to create the will of the people. What we are confronted with in the analysis is not a genuine but a manufactured will. And often this artefact is all that in reality corresponds to the *volonté générale* of the classical doctrine. So far as this is so, the will of the people is the product and not the motive power of the political process' (page 263).

This position should not be interpreted as an Orwellian prophecy. Schumpeter realistically acknowledges that the degree of cognitive and decision-making autonomy of the 'average' citizen as regards political choice is very low. Consequently, the chief problem is to establish whether there exist institutional mechanisms which exert a virtuous effect by enabling citizens to make their political assessments and choices in more rational manner.

This may happen if the political institutions permit the leaders of new groups and parties to emerge, and if they ensure that conflictual political rivalry is resolved peacefully through elections. This for Schumpeter is the function of democracy: to guarantee the proper working of a process of political competition so that leaders enjoying broad consensus may assume power.

Of course, operating in harness with the virtuous process of competition is adverse selection. In fact, the winners of the competitive struggle, those who manage on the basis of

the rules of democracy to form majority coalitions, must fulfil their promises. But verifying that pledges have been maintained, using the power assigned to him to fulfil pre-announced plans, is very difficult for the average citizen.

This evident difficulty also stems from the fact that the good promised to the citizen at the moment of voting is, by the very nature of things, extremely generic. The vote is in a certain sense a blank cheque issued on the basis of an extremely ill-defined agreement between voter and candidate. When the deal is struck, it is of sufficient vagueness to give the future leader broad margins of discretionality.

Precisely because of the extremely generic definition given to the good, it is not possible to conduct fully rational appraisal of its nature and its consequences: the vote is therefore a radical act of delegation, and as such presupposes a high degree of trust in the potential leader. This is therefore a situation which faithfully replicates the mechanism of 'market failure' discussed in the case of the economic system. The good that the electors evaluate is a good for which neither appropriability nor full and rational appraisability exist; it may therefore lead to the emergence of opportunistic behaviour.

In previous sections I have argued - on the basis of the non-appraisability and the non-appropriability of innovations - that the market is unable to develop into a fully self-regulated institution, but requires rules guaranteed by an external power - state power - if it is to maintain its competitive mechanisms. What happens in the case of the institutions of democracy?

There is a distinct possibility that the world of politics dupes citizens, that voters are systematically sold 'lemons' by leaders who make vague promises, who make massive use of covert methods of persuasion, who substitute advertising for political debate. This, to continue with the analogy, induces citizens to withdraw from the electoral market; that is, participation dwindles to the point when democracy as an institution collapses.

Are there remedies? If so, what are they? As in the market, so in democracy opportunistic behaviour can be disincentivated with the threat of loss of reputation, of the trust placed in the leader. The problem once again is whether there exist mechanisms which can bring this about.

Schumpeter suggests - as we have seen - that adverse selection can be combatted by a system which ensures that groups and parties embracing different political positions emerge and can assume power by winning elections. If the competition is effective, leaders are provided with an incentive to keep their promises and to define their policies unambiguously. Since there nonetheless remains a broad margin of non-appraisability of the good, due to its very nature, the rise of institutions which enable citizens to form opinions on, and assessments of, the policies proposed by the leaders in the most informed manner possible is a key factor in the 'virtuous' working of political competition. The mass media may perform this function by furnishing information and evaluations, and by enabling the citizen to assess the leader's performance as a non-wanton good. However, as in the economic system, so in the political arena the markets of information and knowledge are not complete.

## 10. Final Remarks.

With its conceptual unification of economic and political behaviour, Schumpeter's analysis warns us that virtuous selection and adverse selection are ever-present in the market and in politics. Democracy is therefore a vulnerable institution. The limitations of Schumpeter's analysis, as discussed in previous sections, do not vitiate the powerful thrust of his ideas, which even today have still to find full development. He suggests that cooperation

and conflict in society are resolved by much more sophisticated and complex mechanisms than those denoted by the Smithian metaphor of the 'invisible hand'. It is not sufficient for everyone to pursue their interests for advantages to accrue - without those involved in the process being aware of it - to all other individuals and with the overall enhancement of the economy and society. There exist, as the consequence of the pursuit of individual interests, also perverse mechanisms. And since these mechanisms are not imposed from outside but are born of the limitations on human behaviour in the political and economic institutions, there is no guarantee that market and democracy will function in a virtuous manner.

## References.

- Arrow K. J. (1971) "Economic Welfare and the Allocation of Resources for Invention", in Lamberton (1971) (editor) *Economics of Information and Knowledge*, London, Penguin Books.
- Arrow K. J. (1983), "Innovation in Large and Small Firms" in Ronen J. (1983) (editor), *Entrepreneurship*, Lexington (Mass): D C Heath.
- Akerlof G. A. (1970) "The Market for "Lemons": Quality Uncertainty and the Market Mechanism" in *Quarterly Journal of Economics*, 84, pp.488-500.
- Barnard C. (1962) *The Function of the Executive*. Cambridge, Harvard University Press (first printing 1938).
- Barone E. (1908) "Il Ministro della Produzione nello Stato Collettivista", *Giornale degli Economisti*, reprinted as "The Ministry of Production in the Collectivistic State" in Hayek F. A. (1935) pp.245-90.
- Coase R (1937) "The Nature of the Firm" *Economica* 4:386-405.
- Egidi M. (1995) "Virtuous and Adverse Selection within Economic Organizations. (A comment)". in Simon. Mattioli Lecture, Cambridge University Press. in Press.
- Hayek F. A. (1935) *Collectivistic Economic Planning: Critical Studies on the Possibility of Socialism*. London: G. Routledge.
- Hayek F. A. (1952) *The Sensory Order*, London: Routledge & Kegan Paul.
- Hayek F. A. (1945) *The Use of Knowledge in Society*, in *American Economic Review* 35, n.4 pp. 519-530.
- Hayek F. A. (1948) *Individualism and Economic Order* (Reprinted in 1980) Chicago: The University of Chicago Press.
- Hirschman A. O. (1970) *Exit Voice and Loyalty: Responses to Decline in Firms, Organizations and States*. Harvard: Harvard University Press.
- Hirschman A. O. (1984) "Against Parsimony: three Easy ways of Complicating Some Categories of Economic Discourse" in *Bulletin of the American Academy of Arts and Science*
- Kahneman D., Tversky A. (1986) *Rational choice and the Framing of Decisions* in Hogart R. M., Reder M. W. *Rational choice - The Contrast between Economics and Psychology*, Chicago, The University of Chicago Press.
- Keizer W. "Hayek's critique of Socialism" in Birner J. and van Zijp R. (editors) *Hayek, Co-ordination and Evolution*, London: Routledge.
- Lange O. (1936-37) "On the Economic Theory of Socialism: Part one/ Part two" *Review of Economic Studies* 4:1 pp. 53-71 and 4:2 pp. 123-42 reprinted in B.E. Lippincot (1964) (editor) *On the Economic Theory of Socialism*, New York: Mc Graw Hill.
- Loasby, B. J. *Herbert Simon's Human Rationality* in Samuels, W. J., (ed.) *Research in the history of economic thought and methodology*. Volume 6. *A Research Annual*, Greenwich, Conn. and London: JAI Press, 1989, pages 1-17.
- March J. G. (1988) *Decisions and Organizations*, Oxford: Basil Blackwell.
- March J. G. e Simon H. A. (1958) *Organizations*, New York: John Wiley.
- Marris, R., (1964), *The economic theory of managerial capitalism* London: Macmillan.
- Marris, R. (1972) *Why Economics Needs a Theory of the Firm*. *Economic Journal* 82(325)
- Marris, R. (1984) "A New Model of the Process of Business Concentration" in Levicki C. (editor) *Small Business: Theory and Policy*. London: Croom Helm.
- Marris, R., Mueller, D. C. (1980) *The Corporation, Competition, and the Invisible Hand*, *Journal of Economic Literature*; 18(1).

- Nelson R. R. and Winter S. (1974) "Neoclassical vs. Evolutionary Theories of Economic Growth: Critique and Prospectus", *The Economic Journal* n. 4 (336) pp. 886-905.
- Nelson R. R. and Winter S. (1982), *An Evolutionary Theory of Economic Change*, Cambridge (Mass): The Belknap Press of Harvard University Press.
- Newell A. and Simon H.A. (1972) *Human Problem Solving*, Englewood Cliffs, N.J.: Prentice Hall.
- Polanyi M. (1958) *Personal Knowledge: Towards a Post-Critical Philosophy*, London: Routledge and Kegan.
- Robertson D. H. (1930) *Control of Industry*, London: Nisbet & Co.
- Schumpeter J. A. (1942) *Capitalism Socialism and Democracy* New York: Harper & Brothers Publ.
- Simon H. A. (1957), *Models of Man*, New York, Wiley.
- Simon H. A. (1972), "From Substantive to Procedural Rationality" in McGuire C. B. and Radner R., *Decision and Organization*, Amsterdam, North-Holland.
- Simon H.A and Newell A (1972), *Human Problem Solving*, Englewood Cliffs, N.J: Prentice-Hall.
- Simon, H. A.(1993) "Altruism and Economics" in *American-Economic-Review*, 83(2), May, pages 156-61.
- Simon, H. A.(1991) "Organizations and Markets" in *Journal of Economic Perspectives*; 5(2), Spring, pages 25-44.
- Singley M. K. and Anderson J. R. (1989) *The transfer of Cognitive Skill*, Cambridge, Massachusetts: Harvard University Press.
- Williamson O. E. (1975) *Markets and Hierarchies: Analysis and Antitrust Implications.*, New York: Free Press.
- Williamson O. E. (1985) *The Economic Institutions of Capitalism*, New York: Free Press.
- Williamson O. E. and Winter S.G. (1991) (Editors) *The Nature of the Firm: Origins, Evolution and Development*. New York: Oxford University Press.
- Winter S. G. (1982), "An Essay on the Theory of Production", S. H. Hymans (ed.), *Economics and the World Around It*, Ann Arbor: Michigan University Press.