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Revised, but still preliminary

The economic roles of government: ideological preferences versus evolutionary constraints

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Abstract: What economic roles should government be allowed or required to play? This is still a controversial question, to which different political actors – depending on their ideological preferences, rent-seeking opportunities, and analytical knowledge – may give very different answers. In the short run, it is the actual government that chooses which answer will be implemented: its economic roles only depend on its will. In the long run, however, there are important evolutionary constraints, at first possibly difficult to see, but eventually able to override the will of even the most powerful government. This paper has two aims. First, by using a special combination of evolutionary and institutional analysis, to identify these constraints. Second, by taking into account human cognitive abilities as actually evolved (and not as wishfully assumed to fit desired conclusions), to indicate which specific economic roles these constraints will allow or require government to play, and from which roles they will force it to abstain, under the threat of disruptive economic and/or social crises.

1 Introduction

What roles in the economy should government be allowed or required to play? This is still a highly controversial question, to which different political actors – depending on their ideological preferences, rent-seeking opportunities, and analytical knowledge – may give very different answers. It is still possible to hear advocacy of different mixtures of different roles – including national planning (although this perhaps not so much any longer), ownership of banks and other enterprises, industrial policies, welfare policies, fine macroeconomic tuning, demands for public goods, legislation of laws and regulations, and maintenance of law and order. The mixtures range from advocating a large space for all these roles to refusing them all, with the claim that all economic activities should be left to private enterprise and voluntary market contracts, including the making of laws and the maintaining of order.

In the short run, it is the political actors actually in office who determine which answer will be implemented: the economic roles of government only depend on their will. For evolutionary economists, however, this is not the end of the story. To be sure, they must fully recognize the possibly great impact of political decision-makers on the forming and reforming of economic institutions in general, and on the government economic agenda in particular. But they must also search for, and bring to light, influences of other factors, possibly negligible in the short run, but growingly important and eventually overriding the will of even the most powerful governments in the long run. It is such factors and their influences on the economic roles of government that this paper is about.

But emphatically, contrary to what Marxists used to do, this does not mean believing in any superhuman historical forces that would push the evolution of human societies towards some pre-determined outcome. In agreement with the methodological individualism of modern social sciences, all factors of socioeconomic evolution will be understood as aggregates of individual behaviors – in other words, what a society does will be seen as consisting of nothing else than what at least some of its individuals do. But far from any simple sum, such an aggregate will be admitted to be complex, and also to depend on how the individuals are organized. Once formed, the aggregate will moreover be recognized able to influence and shape, *within the limits of their individual learning abilities*, their behavioral characteristics, and thereby have possibly strong *feedback* influences on their behaviors.[1]

This paper will proceed in two steps. First, using a special combination of evolutionary and institutional analysis, it will identify some of these constraints. Second, taking into account human cognitive abilities as actually evolved (and not as wishfully assumed to facilitate analysis and/or fit desired conclusions), it will specify at least some of the government economic roles that these constraints will require, or tolerate, or prohibit, under the threat of disruptive economic and social crises.

The argument is organized as follows. Section 2 explains the combination of evolutionary and institutional analysis used, and shows the evolutionary constraints on the economic roles of government that this analysis brings to light. Section 3 puts forward that the most relevant (and for economists most troublesome) features of the actually evolved cognitive abilities of humans are their individual inequalities and influences of non-egocentric and non-economic preferences. It then shows what unusual economic problems these features raise, considers the possible solutions of these problems, and draws conclusions about the economic roles that evolution may, in consequence, allow or require government to play. Section 4 compares these roles with those preferred by different pure ideologies and with those towards which actual political practice appears to converge. It concludes by considering the different and differently costly ways that the future socioeconomic evolution may possibly take.

2 The evolutionary analysis of government economic roles

2.1 Understanding socioeconomic evolution

How best to understand the evolution of economies and societies is still far from clear. Several theoretical approaches compete for offering the best understanding. I have my own entry to this competition, which I now will use, and thus also test, to deal with the evolution of government economic roles.

This entry is a special combination of cognitive, institutional and evolutionary analyses, as explained in more detail in Pelikan (2003, 2004). It can be seen ultimately to stem from four classical sources: Simon's (1955) argument that human rationality is

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[1] As methodological individualism has often been accused of reducing a society to a "simple sum" of individuals, it is important to realize that this need not at all be the case. Such a naive, "simple sum" methodological individualism, although perhaps not entirely without

significantly bounded, Hayek's (1973) conceptualization of rules and order, Schumpeter's (1942) view of entrepreneurship and development by creative destruction, and North's (1990) definition of institutions as rules-constraints ("rules of the game"), which distinguishes them from organizations as collections of agents who act and interact under these rules ("play the game"). The combination may be seen to start with Hayek's distinction between *the order of rules* and *the order of actions*, which it complements by Schumpeter's entrepreneurs, who organize and reorganize, under the order of rules, *the order of actors*, such as specific firms on specific markets. It then interprets the order of rules in terms of institutions according to North, but compared to him, it extends attention from their effects on transaction costs and other incentives to their effects on the Schumpeterian processes of organizing and reorganizing ("creating and destructing") of the order of actors. These processes that take place under given institutions, and that many modern followers of Schumpeter call "evolutionary," are distinguished from the processes by which the institutions themselves change and evolve, and that may also be called "evolutionary," but of a higher order.

For present purposes, this combination of evolutionary and institutional analyses may be simplified and described in terms of three central notions: *individuals*, *institutions*, and *economies*. Individuals associate, interact and learn on the basis of their preferences and cognitive abilities, including learning abilities (talents), under the constraints of the prevailing institutions. In consequence, they self-organize into, and make function, an economy. How their economy will perform and develop thus depends both on their individual preferences and abilities, and on the constraining (shaping, channeling) effects of the institutions. Some of their interacting may also cause the institutions to change, which may have important consequences, both intended and unintended, for how the economy will subsequently perform and develop.

2.2 How institutions relate to government

The adopted definition of "institutions" calls for more clarification. While virtually all economists now agree that "institutions matter," they are still far from agreeing on what the word "institutions" may mean. Some define it very broadly, including items of very different natures – such as money, languages, and organizations – while others define it narrowly, as

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some equally naive supporters, has mainly been used by opponents of all methodological individualism as an easy-to-beat straw man.

the detailed routines (programs, algorithms) that guide, step by step, actual behaviors. That evolutionary analysis concerning institutions, to be clear and fruitful, needs to follow North (1990) and define them as rules-constraints, or "rules-of-the game," is argued at some length in Pelikan (2003). Here I will only spell out what is important to keep in mind about them for dealing with the present problem.

Following North, institutions fall into two kinds: *formal*, consisting of codified laws and regulations, and *informal*, consisting of socio-cultural norms, often strongly influenced by religions (which, in some cultures, may also determine the codified laws). Institutions may therefore change and evolve in two ways, which sometimes support, and sometimes conflict with, each other: *formally*, by politically determined legislation (institutional policies, reforms); and *informally*, by behavioral innovations of anonymous individuals that are growingly imitated, until they become new socio-cultural norms.

Informal institutions and the informal ways of their changes constitute an important constraint on how – to what extent and how fast – institutions may effectively be changed by deliberate reforms (legislation). A controversial question is, whether this constraint should be respected and even an urgently needed reform therefore slowed down, or whether such a reform should formally proceed as fast as possible ("shock therapy"), with the argument that this would create the strongest pressure for also making the informal institutions change, even if not immediately. For the present problem of government economic roles, however, informal institutions are not very important and this question need not be addressed.

Namely, government and institutions are related in two ways, but both only involve formal institutions. While all of these are produced by the legislative branch of government, some of them define what policy instruments the executive branch is allowed or required to handle. The economic roles of government thus fall into two types: those that determine the formal institutions, that may be called "institutional policies"; and those that handle the defined policy instruments, that may be called "operational policies."[2] The question of government economic roles then also falls into two: Which institutions, if any, should be designed and legislated by government? Which operational policy instruments, if any, should these institutions allow or require government to handle?

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[2] Perhaps the sharpest distinction between these two types of policies can be found in German Ordo-Liberalism, where they are denoted as "Ordnungspolitik" and "Prozesspolitik" respectively.

2.3 Institutions as the units of selection in socioeconomic evolution

There is a disagreement among evolutionary economists on whether or not socioeconomic evolution is in some sense Darwinian – or, more precisely, whether or not it may fruitfully be studied as such. And among those who say yes, there is a disagreement on *how* Darwinian this evolution is, and which parts of the biological Darwinism may fruitfully be generalized and applied to it, and which parts are too biology-specific and must be left aside. While I am firmly on the yes-side, I disagree on several points with the currently most publicized version of General Darwinism proposed by Hodgson and Knudsen (see, e.g., 2006), which I find, together with its no-side critics, such as Witt (2004) and Cordes (2006), to be short on fruitful socioeconomic applications. While my version of General Darwinism is elaborated elsewhere (Pelikan, 2007b), here I only briefly summarize the points that may help to understand the present problem of evolution of government economic roles.

In a broad agreement with usual views, but in somewhat less usual words, this version understands Darwinian evolution as a trial-and-error search for initially missing instructions that could safely guide a given set of elementary agents in given environments to self-organize into, and make successfully function a larger and more complex agent – such as an organism, an organization, or a society. The problem is that the elementary agents are intrinsically able to form a very large variety of complex agents, but only a small minority of these may be successful according to given success criteria. The smaller this minority, the more information the instructions must contain.

Following Campbell (1974), such a Darwinian search is often described in terms of *variation*, *selection* and *retention*, but what these terms are exactly about is still subject to controversies.[3] The suggested version of General Darwinism specifies them as follows:

- the variation concern the different instructions for given elementary agents on how to form and make function larger and more complex agents;

[3] For a longtime, Hodgson and Knudsen have been committing the error of referring to Campbell, but distorting his three key notions into "variation, inheritance and selection." This not only replaces the general notion of "retention" by the more biology-loaded "inheritance," and thus makes their Darwinism inapplicable to large parts of socioeconomic evolution, but also departs from the simple logic that what is retained – be it by inheritance or by any other kind of memory – must first be selected, and not the other way round.

- the selection is done by testing the performance of the large agents formed, but the units of selection that may be retained over time are the instructions that have lead to the forming and functioning of these agents – and not these agents themselves, as they may be changeable and/or short-lived;

- the retention may be realized by any memory capable of preserving the successful instructions selected over time – and not necessarily by replication and inheritance.

The closest reference appears to be Dawkins (1976, 1982), who specifies the units of selection to be genes, selected according to the abilities and performance of their organisms, which carry them, protect them, and, by producing generations of offspring, allow them to replicate and thus be retained over time. But, by focusing on the replication of genes, which, in biology, is indeed the only way of retaining their information over time, without saying much about their instructing roles, Dawkins helps little, and may even mislead, the social scientists who seek to generalize Darwinism for applications in their domain. Human organizations and societies rarely have offspring, but most often form, develop, and evolve or dissolve as childless singles, which limits the possibilities of speaking of replication and inheritance in their case. To understand their evolution, more attention must be paid to the instructions that guide their individuals to make them into what they are, and it must be admitted that they themselves need not replicate to retain such instructions over time. Too much attention to inheritance and replicating, and too little to instructing, appear indeed to be the main reasons why the Hodgson-Knudsen version of General Darwinism is so short on fruitful socioeconomic applications.

Why economists may find the present version of General Darwinism easier to apply is that for it, the units of selection in economic evolution are the institutons of economies in the above-mentioned sense of rules-constraints, or "rules-of-the-game," the basis of most of modern institutional analysis. What economy a given population will form, and how this economy will function and develop, depend indeed most importantly on them – as both institutional and development economics now increasingly agree. The get a handle on the present problem of government economic roles, it suffices to realize that these roles are defined by a more or less large subset of each economy's institutions (that economists liking biology may see to correspond to the segment of an organism's genome that instructs the forming of the organism's central nervous system).

The present version of General Darwinism has moreover the advantage of clearly identifying the elementary agents of which the large evolving entities are being made. This connects it to methodological individualism, and thus provides analysis of socioeconomic evolution with a solid micro-basis, without which, as has so many times been demonstrated, no socioeconomic analysis can be entirely clear.

2.4 The multiple criteria of selection: double efficiency and double equity

Adopting institutions as the units of selection, the next question is, what are the criteria that decide which of them will be selected and retained, or which ones will be rejected? For socioeconomic evolution, the answer is more complicated than for biological evolution. Only some of these criteria are, like in biology, indirect, testing institutions through the performance of the economies that they instruct the given population of individuals to form and make function. Socioeconomic evolution moreover uses direct selection criteria, as the individuals involved often value institutions as such – for instance, for procedural justice, or for freedom and dignity – and use political means to reject those they dislike, to a large extent regardless of how good for the economy's performance such institutions might be.

What further complicates the selection criteria is that both the direct and indirect ones are double. The economy's performance is tested not only for the efficiency with which available resources are used for its output and growth, which may be seen to correspond to the fitness criterion in biological selection, but also according to how equitably, with what "substantive justice," according to the prevailing socio-cultural values, the output is distributed among the economy's agents, for which there does not appear to be a biological counterpart. Political means may again be used to reject even the most efficient institutions if the distribution to which they lead is considered "unjust." Following Hayek (1976), it is certainly possible to argue that, to be rational, people should disregard substantive justice, and value institutions only according to their procedural justice and the efficiency of the economy to which they lead. But such arguments appear to have only limited impact on humans *as they are*, with their atavistic preferences for solidarity, compassion, status, and envy.

The efficiency criteria are static and dynamic. While standard economics is often limited to the former, both biological and socioeconomic evolutions put more weight on the latter – especially in changing and hardening environments, to which economies and societies

must be able to keep adapting, and their institutions must therefore allow and incite their agents to generate and adapt to all the necessary innovations.

In general, the severity of all the selection criteria depends on environments. The efficiency criteria depend on the harshness and the variability of states of nature and world markets. If these environments are generous, both the efficiency criteria are permissive. If they are harsh, but stable, only the static criterion is severe. It is "only" when they are both harsh and variable that both the efficiency criteria are severe. But this "only" is no longer an exception, but the case of virtually all real-world economies.

The equity criteria depend on socio-cultural environments. They are less severe in cultures with less envy and more individualistic values. The more people are culturally conditioned to care about each other – be it positively or negatively – the more severe these criteria are.

Why it has been so difficult for socioeconomic evolution to produce a successful species of institutions that could remain stable, while allowing economies to keep changing, developing and adapting to harsh and changing environments, is that each of these selection criteria must be met. A failure to meet a single one suffices for rejection. Too low efficiency will cause economic collapse, no matter how equitable the distribution of the output might be, and what is perceived as unacceptably unjust distribution will cause political rejection, no matter how efficient the economy might be.

Thus, it is each of these selection criteria that is able sooner or later to overrule, if it is not met, the
political choices of government economic roles, regardless of how much political will and power might be behind them. Be it by letting government do too much or too little, institutions that cause a failure in meeting any of these criteria cannot lastingly succeed.

3 Which government economic roles may evolution require or tolerate?

3.1 Humans as they have evolved

To specify some of the government economic roles that evolution will require, tolerate, or prohibit – the second task of this paper – it is first necessary to clarify what may safely be assumed about human individuals. It is with them that institutions must be able to cope, and it

is on them that the success or failure of different institutions critically depends. Wishful assumptions about them appear to be the main reason why so many institutions shown successful in theory fared so poorly in practice. For instance, socialist institutions can be shown successful if all humans are wishfully assumed to be highly altruistic and cooperative, while for showing the success of liberal institutions, all individuals must equally wishfully be assumed to be highly rational, responsible, and individualistic. It should therefore come as no surprise that both these types of institutions experience difficulties with people as they are.

But how to learn what characteristics humans really have, and which of these characteristics must be taken into account for the problem of government economic roles? In general, the learning can use experimental methods – such as letting different people pass different tests or play different games in which important characteristics of theirs will come to light – or, as evolutionary psychology tries to do, deduce some of these characteristics from the conditions to which humans must have been able to adapt during their evolution.

Important evolutionary constraints on the economic roles of governments appear possible to deduce from two basic characteristics of homo sapiens that are so obvious that they do not require any advanced methods to be recognized:

- unequally bounded economic rationality (in the sense of individually different cognitive abilities for solving different kinds of resource-allocation problems);

- non-economic and non-egocentric preferences – including sensitivity to others' consumption, and values concerning institutions, such procedural justice and freedom.

Both these characteristics are shaped by the prevailing culture (including religion), under the constraints of human nature – meaning the inborn learning abilities, or talents, given by the genomic endowments of homo sapiens. Contrary to what used to be believed, there is now solid evidence that the humans are not unboundedly malleable (see, e.g., Pinker, 2001). Of course, it is still far from fully known what these constraints are and to what extent humans can learn to increase their rationality and adjust their preferences to what the success of their institutions may demand. But evidence is growing that the constraints are significant, implying that many institutions that would work wonderfully with suitably idealized individuals are bound to fail with humans as they are or, more precisely, as they have evolved.

3.2 Unequally bounded rationality and efficiency problems

Each of the two characteristics considered raises serious, but so far little examined problems, which the prevailing institutions, to be selected and lastingly retained, must be able successfully to solve – or, more precisely, allow and incite the economy's agents to solve.

As considered in more detail in Pelikan (2007a), the problems raised by unequally bounded rationality concern the efficiency of its allocation and uses in society. A complication is that they these problems are substantially different, requiring different solutions, for production and for final consumption.

Assuming that the rationality relevant to different economic tasks is distributed in a similar way as other human abilities – that is, roughly normally – the efficiency problem on the production side is, how to select for the most important tasks – such as large-scale entrepreneurship and investment – some of the very few most relevantly rational individuals ("industrial champions"), and demote all the insufficiently rational ones, to minimize the losses from what Heiner (1983) termed "competence-difficulty gaps." While the experimental nature of the organizing and reorganizing of production, required by emerging innovations and changing environments, makes it impossible to stop such gaps from occurring, the institutions must prevent them from lasting.

The efficiency problem raised by unequally bounded rationality for final consumption is, how to prevent little-rational consumers from wasting resources on harming themselves and/or, through the perceived spillover effects of their little-rational consumption, others. Of course, this is not a pure efficiency problem, as it also involves some preferences (values) – such as compassion, respect for consumer sovereignty, and the valuation of spillovers from others' consumption – on which more below.

3.3 The rationality limit of government

For the problem of government economic roles, the main question is: in what ways, if any, can government help to solve these problems?

That the government's potential to help the economy has a significant limit has been shown by the classical Public Choice analysis (for a recent summary, see Buchanan, 2003). The well-known reason is that government agents are likely to seek rents for themselves, rather than pursue social objectives, however defined, and thus raise serious agency problems. Rationality-allocation analysis adds that this potential has yet another limit: for many

important economic problems, government agents are unlikely to possess sufficient rationality.

The reason is that government agents are not selected by market competition for their relevant economic rationality, but by political or administrative processes that promote other abilities – such as attracting votes or pleasing superiors. This implies that their economic rationality is likely to be, in average, far from the top one that is required for efficient entrepreneurship and investment in production.

But, compared to the roughly normal distribution of economic rationality over the entire population, the rationality of government agents in working democracies is also far from the lowest. Assuming that rationality is distributed about normally over both the voters and the candidates, and that the voters avoid voting for candidates less rational than themselves, the average rationality of the elected candidates can be shown modestly to exceed the average rationality of both the voters and all of the candidates (Pelikan, 2007a).

Exceptions are of course possible: some of the government agents may also happen to be industrial champions. But their probability is and remains low. In political democracies, where all voters keep an equal amount of votes regardless of how rationally or irrationally they vote, the outcomes of the voting cannot substantially improve over time.

Market competition, in contrast, as pointed out longtime ago by Alchian (1950), Friedman (1953) and Winter (1971), has the evolutionary advantage of selecting for high relevant rationality, and thus converging, although possibly not very fast, to select some of the best entrepreneurs. When the competition also includes financial markets, where entrepreneurs are selected by investors, who will gain or lose capital in function of how the entrepreneurs selected will perform, this selection may be compared to a democracy that keeps redistributing – not entirely reliably but with significant probability – votes from little-rational to more rational voters-investors.

What may come as a surprise is that the rationality limit of government crosses over the classical rent-seeking one: it is more constraining for production, but less for final consumption. Even when the agency problems with rent-seeking government agents are reasonably solved – which in many cases is possible, as similar problems arise, and are often reasonably solved, in large private firms – the rationality limit continues to exclude government from entrepreneurship and investment in production because of its far from the best relevant rationality. For final consumption, in contrast, it recognizes government to be

more rational than a large part, possibly a majority, of the population, and therefore admits it to have an important potential for paternalistic policies, by which the less rational consumers may actually be helped, if the agency problems are reasonably solved, not to harm themselves and/or others.

3.4 Implications for the constraints on government economic roles

Whether or not the rationality limit of government is a binding constraint on its economic roles depends on the severity of the selection criteria, which in turn depends on the states and the variability of the natural, economic and socio-cultural environments. As long as the environments are easy, the section criteria are permissive, and government can largely do what it wants, even if this is neither very efficient nor very equitable. Only in such environments can institutions remain as "imperfect" as those studied by Eggertsson (2005).

When environments grow difficult – be it because of growing scarcity of resources, or because of increasing demands of the population – the situation may drastically change. The selection criteria become more severe, and the economy, to meet them, must be both highly efficient and equitable enough according to the prevailing socio-cultural values. This decreases its tolerance for institutional imperfections, and thus also reduces the scope for the choice of government economic roles. It is then even possible that both these criteria cannot be met at the same time. Meeting one may exclude meeting the other, which means economic crisis or political crisis.

The evolutionary constraints on government economic roles that difficult environments make binding must again be considered separately for production and for final consumption. The former appear familiar, as they correspond, and bring additional theoretical support, to several parts of the by most practical economists now accepted Washington Consensus. They may roughly be summarized in three points:

- Hands-off the ownership, organization and management of, and investment in, production enterprises, including commercial and investment banks. Leave all this to market-selected agents, whose relevant rationality, after an initial period that markets need to demote the often many little-rational candidates, is likely to be much higher.

- Help, if necessary, with the design and maintenance of institutions for market competition, to make it and keep it able to select for high relevant rationality, and not low ethical standards.

- Formulate and finance much of the demand for – but again, hands-off the production of – producer public goods, including infrastructure, education, and basic research. Although this demand is likely to be far from fully rational, this is usually better that no demand for such goods at all.

Concerning final consumption, however, the implications address problems that Washington Consensus leaves aside, and their paternalistic character may even appear to contradict its spirit. They may also be roughly summarized in three points:

- Help little-rational consumers with the access to and the understanding of relevant information (cf. the "libertarian paternalism" justified by Thaler and Sunstein, 2003).

- Increase their share in consumption, to meet the prevailing standards of substantive justice, but not in the decisions concerning production, to protect these decisions from low rationality, and thus avoid waste of resources and losses of output.

- Decide on selected parts of their consumption, to protect them, according to the prevailing standards of compassion, from harming themselves, and/or to protect other consumers from negative spillovers of their otherwise little-rational consumption. This includes controlling the quality of selected consumer goods.

3.5 Possible conflicts with the prevailing culture

The prevailing culture, often with religious ingredients, is known strongly to influence (shape, condition) the populations preferences – including the tastes for own consumption, the sensitivity to the spillovers of others' consumptions, and the valuation of institutions as such. These preferences may, and usually do, have significant effects, positive or negative, on the possibilities of respecting the evolutionary constraints. If the economy fails at some of its selection tests, they are often the main causes of such a failure.

To give any comprehensive account of such effects is difficult, but two examples may convey the main idea:

- Strong preferences for distributional equality (substantive justice) may hinder efficient rationality allocation in production. In addition to the usually considered negative effects on the incentives for work, entrepreneurship and productive investment, too much redistribution of output hinders efficient rationality-allocation to these activities. In consequence, the entire production will be less efficient, less innovative and less adaptive – which in hardening environments may prove fatal.

- Strong preferences for individual freedom and consumer sovereignty may hinder the use of paternalistic policies for solving rationality problems in final consumption. In consequence, little-rational consumers may be left free to waste resources on hurting themselves in terms of their own preferences, and/or, if their little-rational consumption is perceived to have significant spillovers, others. Some little-rational consumption – such as smoking, heavy drinking and overeating – may cause so much waste and have so many strong spillover effects, that in the long run it may also prove fatal.

Preferences for individual freedom raise yet another problem: Where to draw the boundaries of the freedom of one individual in relation to the freedom of others? In the short run, the answer may depend on cultural and legal traditions, and thus be a matter of social conventions. But in the long run, from an evolutionary point of view, some answers may again prove more successful than others, as the chances of the economy to succeed at its efficiency and equity selection tests may also depend on where these boundaries are drawn.

4 Concluding comments

4.1 Ideologies propose and value, but evolution has the last word

An ideology usually combines more or less precise wishes how economies and societies should be organized, beliefs, often claimed to be knowledge, that this is feasible and would actually work, and criticism of alternatives, including the status quo (if different from the wishes). In socioeconomic evolution, this makes ideologies play important roles both in the generation of variety and in the criteria of selection: many proposals for institutional change stem from their wishes, and many institutions may be politically rejected because of their criticism. But, as was just shown, socioeconomic evolution has its own constraints on what institutions may succeed in the long run, that may overrule even the most vehemently propagated and forcefully implemented ideological wishes.

What these constraints have been found to imply is far from meeting all the wishes of any pure ideology. Because of the rationality limit of government and the importance of efficient rationality-allocation, classical liberalism is implied to have important evolutionary advantages over both socialism and selective interventionism in production, although not in its purest form. Some government demand for producer public goods, and some legislation of institutions for taming and maintaining the selective pressure of market competition have

been found to have more chances of evolutionary success than full-fledged laissez-faire – even if the questions of *which* demand and *which* legislation are still widely open.

For final consumption, socioeconomic evolution has been found to switch its favors. In the long run, whether classical liberals like it nor not, it is prepared to overrule their wish for full consumer sovereignty both economically and politically. Its constraints has been found to imply, and corroborating evidence already appears available, that institutions without a certain minimum defense against little-rational consumption and a certain minimum redistribution of output will cause both growing inefficiencies and dissatisfaction leading to their political rejection by vast majorities of people as they are.

Interestingly, today's political practice appears increasingly to respect both the evolutionary constraints – in spite of being frequently accused of ideological impurity. The Left is increasingly admitting that production needs private enterprise and market competition to deliver the goods (e.g., New Labour), while the Right is increasingly recognizing that some redistribution and paternalism are necessary to avoid costly social crises and political rejection (e.g., Compassionate Conservatism).

4.2 How will socioeconomic evolution continue?

In agreement with Nelson and Winter (1982), but contrary to Hodgson and Knudsen (2006), the present generalization of Darwinism makes it clear that socioeconomic evolution also involves elements of Lamarckism: experiences with the working of economies may indeed constructively influence, in a feedback fashion, their institutions. In biological evolution, in contrast, no such feedback is admitted: according to the theoretically justified and empirically corroborated Weismann barrier, experiences of organisms cannot constructively influence their genomes. Why this feedback exists in human societies is that their institutions are artifacts of their own members. The co-authors of institutional changes are therefore some of the individuals who observe how the economy under its institutions works and develops. The Lamarckian feedback passes through their brains, which they may use for trying to deduce from their observations what institutional change, if any, is necessary, and then work as political actors or anonymous institutional innovators on making their deductions implemented.

But how effectively this Lamarckian feedback may work clearly depends on what the co-authors know about the effects of different institutions on economic performance. As long as they do not know much, socioeconomic evolution remains close to purely Darwinian. Their choices from the variety of possible institutional changes remain close to random, in the sense of being little relevant to any intended effects, in spite of what they may themselves pretentiously believe. False beliefs about these effects may even lock the evolution on the wrong track for a longtime – although, emphatically, not forever. Sooner or later the evolution will force a departure from this track by causing a deep crisis, the deeper the longer the lock-on has lasted.

Any lack of knowledge of the effects of different institutions over time implies that socioeconomic evolution cannot proceed otherwise than by more or less imperfectly informed trials and elimination of the committed errors. But thanks to human brains, only some of the errors need cause real costly crises. As made clear by Popper (1963), growing relevant knowledge allows an increasing proportion of human errors to be intellectual, cheaply corrected on paper (or now in computers), and thus stopped in time, before causing large real losses. The search for this knowledge is therefore one of the most important tasks of theoretical economics, to which its institutional, evolutionary and cognitive fields appear most able to contribute.

Depending in part on what knowledge will effectively be obtained, spread and respected, socioeconomic evolution may continue in one of two ways: either forever oscillating between crises caused by too low efficiency and crises caused by unacceptable inequalities, with the risk that some of these crises may be fatal to the entire human civilization, or gradually converge towards a viable compromise between the efficiency demands of nature and the equity demands of cultures. But for this, as nature is harder, it is the cultures that will have to make the greatest concessions. The open question is which of them, if any, will prove adaptive enough to do so.

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