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Economic Things, Legal Persons and the Hybrid Business Corporation

1. Introduction.

In the standard approach, the corporation is seen as a form of centralized market transactions, and/or simply a nexus of contracts. This approach ignores the complexity of the joint (and sometimes contrasting) interests existing within firms requiring that they must often become independent fictitious legal persons.

Some fictitious legal persons, such as States and Churches, have full-blown rights similar to those held by most citizens of modern societies, including those rights entailing that they can own things and, like citizens, they cannot be owned or traded as things. By contrast, the modern corporation is a half-legal person that can own things but can be also owned as a thing.

The evolutionary process leading to formation of the modern corporation must be seen in a double perspective: as centralization of market transactions, and as decentralization of some characteristics of legal personality that used to be direct or indirect attributes of public and/or non-profit institutions. This original ambiguity of the modern corporation can shed light on some of the problems that characterize an economy dominated by this organizational form.

The paper is structured in six sections.

In the next section, we show that fitting the corporation into economic analysis requires a substantial departure from the Walrasian and Kelsenian theories that have characterized the prevailing economic and legal approaches. An outcome of these theories was the formulation of two separate economic and legal Nirvanas. In both Nirvanas it was impossible to find a convincing explanation for the existence of the corporation and in general for the plurality of institutions characterizing real-life economies.

In the third section, we show how outside Nirvanas neither complete law nor complete markets can exist while the business corporation can be explained as both a decentralization of the powers of legal persons (such as nation states) and as a centralization of market transactions. This view requires an integration of Coase's economic analysis of transaction costs with Fuller's legal analysis pointing out that a plurality of decentralized legal orders and a plurality of non-human legal persons is bound to exist.

Section 4 deals with the nature of the business corporation evolving as both a thing and a person. The business corporation can be roughly defined as a "semi-legal-person". As a person it can own things (including other corporations). As a thing, it can be owned and sold by other persons. This "half-thingness" distinguishes the corporation from full-blown legal persons such as humans, universities, churches, unions, national states and other levels of public government.

Section 5 focuses on the thing-person tension existing within the business corporation. This tension has expressed itself in different ways in continental Europe and the United States, which are characterized by different levels of ownership dispersion. However, in each of these two cases, particular mechanisms have limited the tendency of the business corporation to become an irresponsible thing, unable to make commitments and generate trust. However, both anti-degenerative mechanisms have recently failed under the increased pressure of financialization.

In section 6 we examine the link between financialization and the form of intellectual monopoly capitalism that has emerged in recent decades. We argue that, under this new form of capitalism, the business corporation has again acquired a

monopoly power similar to that of the old colonial chartered corporations. However, in this case, business corporations do not receive specific regulatory charters by national states but constraint their freedom by investing only in the in Nations with favorable regulations. Half-legal persons condition what are supposed to be full legal persons such as national states that should express the political will of their citizens. We conclude by observing that this “chartering reversal” may cause economic stagnation, undermine democratic processes, and generate all sorts of nationalistic reactions. We argue that democracies should cooperate in the international governance of business corporations.

2. Enclosing Law and Economics in Separate Nirvanas

In the late Middle Ages, law and economics were part of a unified field including ethical and religious theories. According to Aquinas’ *Summa Theologica*: “... *since one man is a part of the perfect community, the law must regard properly to the relationship to universal happiness.*” And he added that a “*command denotes an application of law to matters regulated by the law. Now the order of the common good, at which the law aims, is applicable to particular ends. And in this way commands are given even concerning particular matters.*” (Aquinas 1990, Question 90 “of the Essence of the Law”. Second Article). Both *universal happiness* and the *common good*, which Aquinas believed to be the aims of law, would later have an important role not only in law but also in economic analysis. However, in Aquinas, law and economics were not yet separated. Together with ethics and theology they were part of a unified field of inquiry.

The legal theories developed in the late Middle Ages have often been seen as a simple rediscovery of the Roman legal tradition. However, in his book “*Law and Revolution*” H. Berman points out that the late Middle Ages marked a social and scientific revolution that can be seen as the beginning of modernity.

The aim of Roman law was not the production of a consistent set of theories. By contrast, the late Middle Age scholars tried to formulate a consistent theory of the world, which included law as well as what are now usually considered economic

issues. These scholars were the founders of the Western legal tradition in which law is conceived to be a coherent whole. According to Berman, *"It was the twelfth-century scholastic technique of reconciling contradictions and deriving general concepts from rules and cases that first made it possible to coordinate and integrate the Roman Law of Justinian"*. (Berman 1985, p. 9)

In the formative era of the Western legal tradition, natural-law theory predominated. It was generally believed that human law derived from, and was ultimately to be tested by, reason and conscience. This theory had a basis in Christian theology and Roman law, which were blended into a coherent whole by Aristotelian philosophy and logic. Its fascinating development was due to the peculiar conditions of the Late Middle Ages, characterized by a plurality of legal persons. These legal persons were jealous of their jurisdictions and often fought to enlarge their boundaries. However, they recognized the existence and the legitimacy of other jurisdictions. The struggle between ecclesiastical and secular authorities was the most visible expression of these conflicts among overlapping jurisdictions. Legal pluralism was a common legal order containing numerous struggling legal systems (church vs. crown, crown vs. town, town vs. lord, lord vs. merchant). These struggles required sophisticated compromises. Independent bodies were required to adjudicate disputes on matters such as: *Which court had jurisdiction? Which law was applicable? How could different legal differences be reconciled?*

The disputes arising from legal pluralism created a demand for new independent institutions. For this reason, institutions, like universities, where different approaches could co-exist, were founded in that age. In the pre-existing academies, only one ideological approach dominated, and in the feudal courts intellectuals were dependent on the generosity of their lords. Thus, academies and feudal courts could not be the appropriate institutions where these disputes could be settled by offering reasonable compromises for the adjudication of different competing jurisdictions. An open debate, nourished by the legacy of Roman law and by Aristotelian logics, could only take place in new independent institutions that were themselves autonomous legal persons. Universities – a typical institution produced by the late Middle Ages – provided this environment. They trained students to advance in their

investigations with a system that embodied some of the fundamental ingredients of scientific research. This method was extended from law to medicine, and later to other disciplines. Legal pluralism was not only a source of freedom and of legal sophistication. It was also a decisive factor in the foundation of universities and the origin of Western science.

The collapse of feudal society and of the centralization of power in the hands of national states marked the end of legal pluralism. The national state tended to regard itself as the only legitimate non-human legal person or, in other words, as the only corporation. The search for natural laws by which the wellbeing of different individuals belonging to different institutions could be improved ceased to be the purpose of legal studies. The law as it was promulgated, or legal positivism, became the dominant approach. Laws became a simple expression of the authorities that were running the national state. In the words of John Austin's (1790–1859) "The Province of Jurisprudence Determined", *A Law is a command which obliges a person or persons* (Austin, 1832 p. 18). According to Austin, *"The science of jurisprudence (or, simply and briefly, jurisprudence) is concerned with positive laws, or with laws strictly so called, as considered without regard to their goodness or badness"* (Austin 1832 p. 132).

Legal positivism underwent a long process of refinement and led to a clear separation between law and morality. Economics went through a similar process that made it autonomous from morality. We will concentrate on the two crucial figures that completed these divides and still have a great importance for contemporary legal and economic doctrines: Kelsen and Walras. The purpose of this brief account of these two important authors is to show that the separation of law and economics from ethics also created a deep divide between these two disciplines, and that, because of this divide, both law and economics had little to say about the plurality of corporate bodies existing in human societies.

Similarly to Austin, also Kelsen (1848, p. 390) declared that *".... the Pure Theory of Law insists upon a clear separation of the concept of law from that of justice..."*. However, the law is not simply a command, and legal studies have a well-defined purpose in establishing the validity of the different rules that must constitute a

consistent whole to offer a guide for human behavior. This activity of (in)validation of rules needs only some transcendental *grundnorm* (founding norm) according to which the consistency and the validity of the other (hierarchically superior) rules can be judged. The validity of the rules, and not their real-life enforcement or their morality, is the content of pure law. Pure law is such because it has been purged of any moral (or real-life) impurity. Given a *grundnorm*, it is a self-contained complete system within which all questions can be answered.

From Smith onwards, political economy followed a similar path of separation from ethics. This separation was clearly expressed by the concept of *Pareto efficiency*, according to which economic evaluations could be made independently of moral judgments. Pareto's contribution was grounded in the work of Leon Walras, who was his predecessor at the University of Lausanne. Walras was a supporter of the principles of natural law and of their moral implications. However, he drew a sharp separation between ethics and economics. Well before Kelsen's *Pure Theory of Law*, Walras' *Pure Economics* emphasized the *purity of a field of research, or its independence from other subjects of inquiry*.

Walras believed in two basic principles of natural law synthesizing the liberal and the socialist views of justice. The first (liberal) principle stated that *Everyone belongs to himself or herself*. The second (socialist) principle required that *All the other natural resources belong to everybody*. These two principles were the essence of *distributive justice*, which according to Walras had to be distinguished from *commutative justice*.

Commutative justice simply requires that nobody exploits the other in exchanges; or in other words, that the individuals trade goods of equal value. *Commutative justice* is compatible with all sorts of initial distribution, including very unjust ones. However, it is, according to Walras, a necessary condition for a *distributive justice* consistent with the principles of natural law. In a system without *commutative justice*, the working of the system would upset the initial natural just distribution as well as any other initial allocation. If one wants to show that economic efficiency and justice are compatible with each other, one needs to show the consistency of the former with *commutative justice*.

Walras's thesis is that in a situation of competitive equilibrium there is a coincidence between the conditions necessary for economic efficiency and those required for *commutative justice*.¹

According to Walras, production in a market ruled by free competition “*will give the greatest possible satisfaction of wants within the double condition, that each service and each product have only one price in the market, namely the price at which the quantity supplied equals the quantity demanded and that the selling price of the products be equal to the cost of services employed in making them*”. (Walras, 1977 p. 255)

This double condition, required by efficiency, is also necessary for *commutative justice*, which implies that individuals would not change their wealth because of unjust exchanges. If the achievement of the greatest satisfaction were compatible with *commutative justice*, it would sustain any initial distribution of resources, including that consistent with the natural laws of *distributive justice*.

Thus, Walras' pure economics was sharply separated from distributive natural laws but it was used to show that these laws are consistent, and indeed overlapped, with those required for the maximization of material welfare. This coincidence is limited to the conditions of competitive equilibrium. It is impossible to obtain the same result in real markets where exchange and production take place at non-equilibrium prices. For this reason, Walras constructed a fictitious ticket economy in which individuals send messages about their trading and production intentions at non-equilibrium prices, but they only implement their plans in equilibrium. He was aware that this fictitious world is very different from real markets, and he proposed reforms that could move reality closer to his utopian project. Subsequent economic theories would show much less awareness of these crucial institutional differences. The restatement of the same properties under the label 'Pareto efficiency', formulated by Walras' successor in Lausanne, was interpreted by most members of

¹ For an account of the Walrasian theory see chapter 6 of Pagano (1985). Posner (1981 and 1993) builds his theory of judicial decisions on a similar identification of efficiency and commutative justice. When we say that somebody is guilty because s/he could have avoided the damage with very little effort, we are making efficiency and justice judgments simultaneously.

the profession as proof of the fact that markets are optimal independently of all sorts of moral judgments.

The separation of both disciplines from ethics went together with the separation between law and economics, which became the two “pure” disciplines identified by Kelsen and Walras. *Pure law* concentrates on the validity of laws, or the internal consistency of legal systems, assumed to stem from a single authority or from a single *grundnorm*. *Pure economics* concentrates on the internal consistency and “efficiency” of the decentralized decisions of maximizing individuals.

Purity and other formal analogies were among the few things shared by the two disciplines that once, together with ethics and metaphysics, belonged to a single field of inquiry. Otherwise the two disciplines lived in two separate Nirvanas, and the internal consistency of each Nirvana seemed to be the most important thing for their practitioners.

However, some hidden relations between these two Nirvanas make *pure law* and *pure economics* two interdependent constructions. *Pure economics* assumes well-defined and complete rights that are exchanged and enforced by a third party. Hence the economic Nirvana requires a legal Nirvana. *Pure law* assumes that the legal order can be completed and made consistent by a single order based on a set of basic norms without limitations due to bounded rationality, cognitive incapacity, failure of collective action, or other limits due to the scarcity of resources. In other words, the legal Nirvana requires an economic Nirvana.

In this situation, we have an implicit alliance between *pure law and economics*, both of which support the idea that society is organized by means of complete markets and a completely centralized legal order. The two interdependent systems are supposed to work at zero opportunity costs because no viable institutional alternative is supposed to exist. The complete centralized legal system is assumed to produce at negligible costs well-defined property rights which allow complete markets and all sorts of exchanges.

Institutions, such as firms or corporations, cannot make sense in a world of pure law and economics. Their analysis required abandonment of the two interdependent Nirvanas in which law and economics are locked. In these Nirvanas,

the role of multiple corporations cannot be explained because a costless perfection can be achieved by completely decentralized markets and by a completely centralized legal order. No room is left for other institutions. From this point of view, the abandonment of the scholastic tradition that studied overlapping multiple institutions can hardly be considered an undisputable scientific advancement of legal and economic theories.

3. Exiting Nirvanas: the real world of costly institutions

Unlocking the Nirvanas was a major achievement of Ronald Coase and Lon Fuller. Their interdependent contributions reintroduced institutional pluralism in both disciplines, and they furnished a theoretical framework within which to analyze hybrid legal persons like the business corporation.

Coase observed that in a world of *pure economics* all decisions would be coordinated by market prices at zero costs. In this world firms would not exist. We would live in what later became misleadingly known as the world of the “*Coase theorem*”. In *the world of the Coase theorem* all possible externalities, including those related to economies and diseconomies of scale, are internalized by market transactions. The zero-transaction market costs world offers only two possibilities. The first is that other institutions are costly and cannot survive. The second is that other institutions are also costless, and the institutional mix is irrelevant for economists. Firms, state regulation and other costly arrangements can only appear in a world where no institution, including the market, is a “free lunch”. In short, Coase’s message was that all institutions are costly and the market is tautologically Pareto efficient only if the costs, required by the functioning of the market system, are ignored.

Coase started from the hypothesis of costly market transactions and reached the conclusion that the existence of other institutions, such as the business corporation, could be explained by the fact that they decreased overall institutional costs. Many of the costs of running a market system had to do with the fact that they involved a costly use of legal institutions. Defining property rights, enforcement, litigations and adjudication costs were ignored by the world of pure economics, which assumed the existence of a free and

efficient public order. Fuller directly tackled these costs of running a centralized public order. Legal pluralism re-emerged as a possible way to decrease the costs of a centralized monolithic order.

Fuller rejected the view of law as an inert and consistent material and defined it in a way that was closer to the late medieval tradition². According to him, law was the enterprise of subjecting human behavior to rules. Like all human enterprises, law requires costly activities and inevitable trade-offs. More resources dedicated to making the law more complete involve an opportunity cost in terms of other human activities such as providing food or health services. Moreover, some trade-offs are intrinsic to the nature of law. For instance, Fuller observes that because laws are supposed to be guides for human behavior, they should, on the one hand, change often (to fit a mutable social environment) and, on the other hand, change seldom (to allow individuals to learn them and develop the habits necessary to comply with them). An obvious trade-off emerges between these two instances. Satisfying one is costly in terms of the other. Another important trade-off, recently pointed out by Pistor and Xu (2004), is related to the degree of completeness of the law. Even if the Kelsenian tradition treats the law as some sort of complete inert material (only supported by a transcendental *grundnorm*), the activity of completing the law involves some important trade-offs. On the one hand, completeness requires rules to be specifically designed to deal with particular situations. On the other hand, completeness requires also that rules have a general applicability to cover many situations. There is again a trade-off within the realm of law. In many cases, the specificity of rules can only be gained at the expense of their generality, and vice versa.

According to Fuller, complex societies can decrease the huge costs of lawmaking only by decentralizing its enterprise to a plurality of orders. Unions, churches and universities have their internal orderings. Firms, and in particular business corporations, can also have their internal private orders. All these institutions can contribute to the enterprise of

² According to Fuller, the positivist approach, advocated by Hart (1990) following the Kelsenian approach, neglected the internal morality of Law “which consists which in the like treatment of like cases, by whatever elevated or perverted standards, the word “like” may be defined (Fuller 1990 p. 89). Fuller (1969) shows that the aspiration of subjecting humans to general rules, has a moral content and this aspiration is characterized by numerous trade-offs. The aspirations of law-making can be evaluated in the framework of what Fuller (2001) called Economics - a new fusion of law, economics and morality, sharing some concerns of the old Scholastic tradition.

subjecting human behavior to the observance of rules at costs that are often lower than those to be sustained by a centralized system that lacks accurate information about many spheres of human behavior. There is no given *legal Nirvana*. Legal orders are generated by a complex and costly process involving the activities of several institutions. The firm, and in particular the business corporation, is one of these institutions. According to Fuller, even a single employer may find it convenient to have a *legal system in miniature* and an internal rule of law that can guide the behavior of his/her employees. Even if the employer sets the rules in an autocratic way, s/he is bound to respect its own rules. Otherwise, according to Fuller, "*If the employer disregards his own rule, he may find his system of law disintegrating and without any open revolt, it may cease to produce for him what he thought to obtain from it.*" (Fuller 1969 p. 47)

Fuller's fall of pure theory from the *legal Nirvana* parallels Coase's fall of Economics from *Nirvana*. Since the two Nirvanas were interdependent, also their abandonment has had many similar features. In some cases, Fuller's costs of a centralized legal order may even coincide with Coasian market transaction costs. Many market transaction costs, such as litigation costs, overlap with those of using the public order. The corporation can be seen as both a form of centralization of market transactions and as a form of decentralization of the public order to private ones. In other words, in a unified Coase-Fuller framework, the corporation can be seen as a decentralization of the public order allowing the centralization of market transactions.

Fuller's and Coase's insights were developed by Guido Calabresi and Oliver Williamson. Similarly to Fuller and Coase, there is a striking parallelism in their contributions in respectively the realm of law and the realm economics.

In a beautiful theoretical construction, which resembled a cathedral and deserved its name, Guido Calabresi illustrated how law (understood *a là* Fuller as the enterprise of subjecting human behavior to the observance of rules) changed its nature according to the level of market transaction costs.

Property rules and contract law could be applied in a world of low transaction costs. In this world, since property rights are well defined and contracts concerning their exchanges can be clear, in the case of litigation it is necessary to refer to the initial contracts. The public order can easily apply the rules that ensue from the contracts.

If transaction costs increase to some intermediate level, we have to switch from property rules to liability rules. The payment of damages, such as those in the case of car accidents, cannot usually be negotiated ex-ante and, in any case, their ex-ante settling would involve high transaction costs with all the people possibly involved in those interactions. In the case of accidents, the only way to reduce transaction costs is to redress the damages after that they have occurred. However, in this case, the transaction undergoes a *fundamental transformation*. Whereas, before accidents, potential culprits and victims may have dealt with each other in a competitive situation, after the accidents they find themselves in a situation of bilateral monopoly. For this reason, a deal can only be reached under the supervision of courts that apply and enforce liability rules. Within the public order, we have to move from centralized ex-ante definitions of property rights and market exchanges to decentralized courts' activities that redefine ex-post property rights and exchanges among the parties.

Finally, when damages have to be prevented, or there are not even ex-post transactions that can redress them, we move to a situation of high or infinite transaction costs requiring negligence rules and criminal law.

Three columns (property, liability and negligence rules, associated with increasing transaction costs) support Calabresi's magnificent cathedral (Calabresi 1991 and Calabresi and Melamed 1972). However, one important column is missing. This is the private order whose rules played such a fundamental role in Fuller's construct. Also thanks to these rules (and not only thanks to liability rules), transaction costs can be decreased. The private governance column must therefore be added to Calabresi's cathedral (Pagano 2010) and a parallel *fundamental transformation*, analyzed by Oliver Williamson (1985), must be added to Calabresi's construction.

Williamson observes that, when individuals make specific investments (that is, investments that have lower returns outside a given relation), competitive market conditions undergo a *fundamental transformation*: they become a bi-lateral monopoly where ex-post competition cannot limit opportunism. If individuals can make binding and complete contracts at the beginning, public courts can still handle the enforcement of these contracts. However, if individuals are unable to write such contracts (that should take all possible future events into account), then only some form of fair governance of

their ex-post relations can tame opportunism. This rationale for private orders, centralizing transactions under some form of supervision, explains the existence of numerous forms of non-public institutions such as the business corporation.

In both Calabresi and Williamson we find *fundamental transformations* that make monopoly and competition two different stages of the same relation. In the case of Calabresi's *Fundamental Transformation*, because of the high number of possible accidents, negotiations occur after individuals have "disinvested" in specific accidents, that is, disinvestments that cannot be redeployed in other relations and involve a situation of bilateral monopoly. In the case of Williamson's *Fundamental Transformation*, because of the high number of possible future events, negotiations occur after individuals have invested in specific assets. In both cases, there is a demand for ex-post verifiability that cannot be simply made with reference to a pre-existing contract. In Calabresi, this institutional demand is satisfied within the public order, which is enriched with the appropriate arrangements. In Williamson, the same institutional demand is satisfied by private orders such as the system of rules existing within organizations such a corporation.

We can now re-state, in a particular but richer way, some conditions for the Fuller–Coase emergence of the firm. When co-specific (dis)investments are frequently made by some individuals, under conditions of ex-ante contractual incompleteness, it can become convenient to move from a system of dispute adjudication run by public judges to a system run by private judges making (second-order) specific investments in the understanding of their specific relations. In the case of sporadic interactions, such as those of car accidents considered by Calabresi, we can rely on independent agents and the role of centralized public courts. However, when individuals cooperate, for a substantial length of time, in projects involving specific investments, the solution of disputes can only come together with the promotion of cooperation, the careful understanding of the relevant human interactions, and with both ex-ante and ex-post dispute-solving by insiders. In this case, a plurality of institutions, including the business corporation, can obtain that citizenship in economic and legal theories which was denied in the Walrasian and Kelsenian Nirvanas.

The business corporation involves a centralization of market transactions and a

decentralization of the public order. Both processes require the formation of an autonomous legal entity. The main feature of the corporation is not so much a common property of non-human assets as the existence of an autonomous legal person characterized by a system of common liabilities and by a centralized power, which, *inter alia*, allows internalization of a Calabresi-type judicial function.

The view of the corporation stemming from the Fuller-Coase contribution differs from that of a large part of the literature, which sees the reason for the existence and growth of firms as being the common ownership of machines and plants. According to this view, the purpose of common property is to avoid hold-up problems. A typical example, considered in this literature, is the GM takeover of Fisher Body. The standard account is that Fisher Body was holding up GM, which wanted to expand production facilities³. This situation made a takeover of Fisher Body by GM convenient. However, there is little evidence that this hold-up was taking place and indeed that it was possible strategy because at that time GM already owned a majority of shares of Fisher Body. According to this version of the story, Fisher Body increased its short-term profits by refusing to make the investments required by GM in a plant located near GM's production facilities in Flint (Michigan). Acquiring the ownership of Fisher's plants was the only way in which GM could overcome the hold-up.

However, an alternative view of the takeover emerges from Alfred's Sloan (1963) memoirs. It is consistent with the idea that the main advantage of the corporation lies in the internalization of the judicial function. This judicial function had been already developed before the acquisition of Fisher Body as an outcome of the fierce disputes that characterized the early life of General Motors. One of them involved Kettering, who was the most important inventor at GM. While the production department had smoothly engineered other inventions by Kettering, his innovative air-cooled engine turned out to be a production failure. Many Chevrolets with burning engines had to be recalled by GM to be fixed, and these circumstances provoked a fierce fight between the research and the production departments. Since the heads of both departments were members of the top management board, the adjudication of responsibilities proved to be a nasty, and almost

³ For instance, Hart (1995, p. 7) observes that "for a long time Fisher Body and GM were separate firms linked by a long-term contract. However, in the 1920s GM's demand for car bodies increased substantially. After Fisher Body refused to revise the formula for determining price, GM bought Fisher out".

impossible, task. For this reason, Sloan re-organized the company in such a way that top management was separated from the management of the divisions. It could thus perform a “judicial” function if something went wrong in the co-specific investments of the two departments (Pagano 2000).

At the time of the Chevrolet problems, Fisher Body was still a formally independent company. It had moved to the car bodies industry from the horse carriages business. We have got used to the idea that the same maker produces both the body and the engine of cars. However, at that time the two businesses were separated in much the same way as the production of carriages was separated from the business of raising horses. Even today, in the airplane and ship building industries, the makers of engines and bodies of airplanes and ships are different.

It is evident that what precipitated these types of mergers in the car industry is related to the “fundamental transformations” considered by Calabresi and Williamson.

The change was due to the transition from open body to closed body cars. With the advent of closed body cars, their weight increased and their barycenter became higher. In order to make the car stable, it was necessary to design and fit the engine properly. Unlike in the cases of ships and airplanes, the design of the engine became co-specific to the body of the car. No precise contract on these co-specific designs was possible, and problems, including disputes, had to be addressed later. A fundamental transformation had occurred, and it involved a shift from decentralized markets and a centralized judiciary to centralized transactions and a decentralized private judiciary operating within a single organization. An independent unified legal person would be liable for the stability of the cars towards customers and would settle the numerous problems that might arise among the different production, sales and research departments. Subjecting behavior to the observance of rules could not be confined to the public order. It had to involve also independent legal persons and their private jurisdictions.

4. The Institution of Non-Human Persons

Non-human legal persons have still to rely on some humans acting on their behalf and according to their interests. The frequent incongruence between the goals of non-human

legal persons and the goals of their representatives is much studied in social sciences. However, what is more puzzling is that humans have evolved the habit⁴ of acting, sometimes even with heroic self-sacrifice, in the interests of non-human persons such as a nation, a tribe or a religious movement.

A naive view of evolution that stresses the advantages of selfishness cannot explain the evolutionary emergence of commitment to others and the esteem for committed individuals. Since the dawn of human (pre-)history, this commitment has been particularly strong towards non-human beings: the totem, the gods, or spirits of the ancestors have often commanded more commitment than physical individuals. Still today, gods and nations⁵ are (non-human) persons for whom individuals are ready to die and to kill.

A satisfactory account of human evolution should explain the reasons why humans have developed such a strong disposition to commit themselves to these non-human persons.

At a first level, an explanation can rely on the fact that the human brain's hyper-development is due to sexual selection (Pagano 2013a). It is geared more to explaining social behavior, and in particular to devising successful reproduction strategies, than to understanding the impersonal laws of nature. This has involved a marked tendency to explain nature as if it has human motivations and to attribute to some human beings the capacity to understand how we can gain the grace of natural forces, or at least tame them. In this way some communities may have started to believe that there was a special relation between a God and their people.

A second level of explanation can then rely on the hypothesis that the communities which share these beliefs can do better in war than other communities. The belief that eternal happiness is given to the individuals who die for their god is still today a sadly

⁴ "Habit means special sensitiveness or accessibility to certain classes of stimuli, standing predilections and aversions, rather than bare recurrence of specific acts. It means will." (Dewey (1922, p. 42)) As Hodgson observes, Dewey pointed "to a circular and durable process, through which the imitation and constraint of custom lead individuals to adopt concordant patterns of behavior (1922). These behaviors give rise to individual habits. These habits help to sustain the same behavioral patterns across the group. These, in turn, become customs, thus completing the circle of causation (555)." Different self-reinforcing mechanisms between habits and customs can generate very distant paths of institutional development.

⁵ Anderson (1991) argued that Nations are not real communities of people interacting with each other but rather "Imagined Communities" identified by a shared past and a common culture. Similarly to Religion, they offer to the individuals of overcoming the uncomfortable feelings arising their individual limitations. According to Anderson, their success was also motivated by the fact that they could partially offer a substitute for these benefits of religious faith after the devastating conflicts following the Lutheran reform.

strong incentive for heroic self-sacrifices and for horrible murders. The esteem for individuals showing commitment to super-human entities has marked many of the most important achievements and the most tragic failures of our species.⁶ Individuals feel that they are part of a single organism, and often in a special relation with a super-natural entity. Cultural diversity and cultural evolution make groups real ‘selection units’ in the sense that cultural barriers limit the flow of individuals from one group to the other (Boyd, Richerson 1985). Selection favors groups with ideologies esteeming individuals according to their commitment to the group and the gods or the other symbols (such as flags, songs, etc.) representing its continuity. The group is treated as an independent entity characterized by a super-human personality, pre-existing and going beyond individual lives. The personality of the group and the nature of its “fiduciaries” change from group to group, but a selection process favors the features that may be beneficial for the survival of a group.

Even if group behavior is likely to be influenced by some forces beneficial for its survival, it may damage the larger population, including all the fighting groups. Group fitness may involve an amazing loss of lives and wealth. It can moreover lead to terrible atrocities. When Cortes invaded Mexico, he found that different ethnic groups were ready to die in war to capture people to sacrifice to their super-human entities, dictating their cruel laws (del Castillo 1996). Human sacrifices of the enemies were supposed to placate the gods. This belief was widespread among the fighting tribes. It is not surprising that this terrible credence had infected so many tribes: the believers were more ready than their unbelieving enemies to sacrifice themselves in war and decimate them during their rites. Enemies would either disappear or would adopt a similar ideology to match their enemies. Deviating from that ideology became impossible. Pre-Cortez Mexican tribes found themselves in a dreadful, but also stable, sort of Nash equilibrium. Even supposing that individuals could choose their ideologies, for each tribe it was an optimal strategy to believe in the salvation effects of sacrificing enemies, given that all the other tribes were committed to that ideology.

⁶ Commitment (Meyer, 2013) and Esteem (Brennan, Pettit 2004) are two aspects of human nature that are relevant to understanding all sorts of human institutions and organizations. Human evolution entails that commitment and esteem play a central role in human affairs. Moreover, the esteem derived from the commitment to non-human persons is likely to be a universal outcome of the evolution of our species.

However, even in terms of group fitness, these ideologies had a weakness: if some groups were able to grow sufficiently strong in terms of military power and had the time to develop a credible ideology, they could offer alliances to the succumbing tribes and could become stronger than their rivals. While the brutal equilibrium could not be overcome by each of the Mexican tribes, it offered a great opportunity for outsiders. With only 300 hundred men, Cortez could use his superior arms, together with the soft power stemming from the Christian religion, which did not require human sacrifices and made it possible to form alliances. He could promise (even if only sometimes did he keep his promises) that he was following more generous rules that were supposed to be obeyed by the winners and that were obviously appealing for the losers.

The Christian religion had made two great innovations. One was the reversal of the sacrifice relation between God and humans. God had sacrificed himself (or a part of the Trinity) for humans, and not vice versa. The second involved, since the Ten Commandments, an imperative to follow some sacred universal rules. Both gave a great boost to the individuals influenced by those beliefs and can help to explain, together with the Greek and Latin heritage, the blossoming of Western civilization.

There is a multiplicity of ways in which individuals can start to respect rules and form reliable and wide alliances. An important example is Confucius' advocacy of good government rules. In the precocious Chinese tradition, rules did not rely so much on God as on direct respect for the ancestors and the community. Confucius' work, produced five centuries before Christianity and translated more than two thousand years later into Latin by the Jesuit Matteo Ricci, influenced also the Western Enlightenment⁷. It was and it still is an important ingredient of Chinese civilization.

Another important example is Socrates' view of the Laws that embody the foundation of society and command respect independently of other religious values. In Plato Crito Sec 12, laws are represented as persons asking Socrates: *".....since you were born, nurtured, and educated through our means, can you say, first of all, that you are not both our offspring and our slave, as well you as your ancestors?"* The rule of law requires

⁷ Matteo Ricci's book (1985), originally written in Chinese with a Latin Summary in 1603, shows how the Jesuits tried to spread Christianity in China by relying on a common ground with Confucianism (Po-chia Hsia, 2010). However, thanks to the Jesuits' work, Confucianism spread in Europe and had a considerable influence on the European Enlightenment (Davis, 1983) .

Socrates to accept the death sentence and not to escape from jail. The laws of the community are seen as an independent corpus whose will must be respected for the welfare of the community.⁸

Even if Athens was a model for future democracies, its laws had a status similar to that of Aztec gods. They were far superior to individuals and their fates. Humans regarded the commitment to a superior person expressing the rules of the community as the basis of (self-) esteem. On this evolutionary basis, sophisticated legal systems and also democracies could be built. If the power of all individuals, including that of the present ruler, is constrained by the rule of law, the State must be an independent person. It must be able to have powers and liabilities, and rights and duties, transcending the particular person acting on its behalf. The State must be a corporation (an independent corpus), whose potential immortality guarantees the continuity of the laws, allowing individuals to interact with each other under certain rules.

Numerous monuments, still bearing the inscription SPQR, (Senatus Populusque Romanus), remind us that the continuity of the same legal person was the condition for the reliability of the first sophisticated system of rules. Similar conditions characterized other institutions such as churches, monasteries, universities etc. They were all independent legal persons that guaranteed the continuity and the development of a certain system of rules. Like the Aztec priests, their temporary rulers were supposed to identify with community missions, defining their (legal) personality and shaping the nature of rules that they produced. No civil and economic development could have taken place without the existence of the commitment to these super-human persons and without the respect for their rules.

Business corporations are the outcomes of historical processes centralizing transactions to non-human persons and decentralizing to them the formulation and enforcement of these rules⁹. They have built on an evolutionary process that has made humans willing to

⁸ Using Hart's (1961) terminology, in order to have property instead of mere possession, "primary" custom-based rules must evolve into third-party-enforced "secondary" rules. Unfortunately, many economists have confused property with possession and believe that property can evolve also among many non-human species (Hodgson 2016)

⁹ Thus, some political rule-making powers and some judicial dispute-solving powers are transferred to the top managers of business corporations. According to Milgrom and Roberts (1990) the same "influence" or rent-seeking costs, which characterize politics, will also be active also within firms. According to them large firms will be viable if the related "influence costs" are smaller than the bargaining costs that should

abide by the rules of non-human persons. However, neither the terrifying images of the Aztec gods nor the overwhelming authority of Athens' laws can ensure commitment to the corporation and to its rules.

At the beginning, the authority of the business corporations derived from the charters of the national states, which, unlike the multiple authorities of the late Middle Ages, attempted to be the sole legal person. Functionaries were not personally liable for the commitments assumed by the State. The State, whoever its temporary functionaries were, was liable for their decisions. These legal person characteristics were extended to the business corporation upon fulfillment of specific conditions. Business corporations were given the opportunity to raise large amounts of money and to monopolize trade in some areas of the world, but they had to abide by a charter specifying purposes and duties consistent with the interests of their countries. Chartered corporations, like the East Indian or the Hudson Bay companies, emerged from the need to decentralize the orders of the national states. In distant parts of the Globe, rules could not be efficiently set and enforced by the central state. The corporations became independent legal persons that were not only able to own goods and stipulate contracts but also to enforce order and to wage war. Their assets were separated from the assets of shareholders, who were liable for the debts of the corporation only for the amounts that they had invested.

Since a (legal) person cannot contract with itself (or sue itself in court), chartered corporations were responsible for settling disputes internal to the corporation (Iwai 2014) and had to build a system of internal rules. The first chartered companies had commercial monopolies on enormous territories. Such regulations were later seen as an obstacle to free markets. However, the Sovereign and the Company struck a deal whereby the company paid for the institutional infrastructure necessary to have markets and, in exchange, obtained monopoly profits.¹⁰ They shared with the nation commitment to the expansion of some political power. All the institutions that we have considered had independent personalities justified (directly or indirectly via a charter) by a well-defined mission (defense or conquest of a territory, diffusion of the faith, education). However, the business corporation was bound to follow an evolutionary path that could easily erode

be sustained by independent entities transacting on the market. Mc Mahon (2013) discusses the legitimacy of the powers acquired by executives.

¹⁰ See Chapter 2 of Rodrik (2011).

part of its independent personality as well the commitment to its rules.

The chartered corporations demonstrated the evident advantages that firms could derive from having an independent legal personality. They paved the way to free incorporation. The limited liability of the shareholders allowed unprecedented funding possibilities. The corporation, endowed with its assets and its potential immortality, could make lasting contracts with other persons. Moreover, many contracts and litigations could be handled by their internal private order. By decentralizing legal personality, the State also decentralized the public order. Since a legal person cannot contract with or sue itself, the State had to show considerable forbearance for the rules and internal disputes adjudication mechanisms of the corporation.

While contemporary capitalism has largely evolved into a corporate economy, economists (with few exceptions) have usually seen the corporation as a clumsy hybrid between markets and state bureaucracy.

Many economists, such as Demsetz and Lehn (1985), have accepted that the corporation decreases market transaction costs. However, at the same time, they have regarded the business corporation as a degenerate child of the market. The market's powerful incentives are lost while managers' incentives are not aligned with the goals of shareholders. The remedies that have been proposed usually take the form of incentives, such as stock options, that have the purpose of re-aligning managers' incentives with the interests of the "owners" of the corporation. However, this attempt to realign incentives can create new, and even worse, problems. Because of limited liability, shareholders' interests conflict with the interests of other stakeholders such as the creditors of the corporation (Mayer, 2013). Thus, there seem to be little hope of eliminating the defects of the market's degenerate child and regaining the incentives of the standard textbook profit-maximizing firm.

Whereas the usual benchmark of economists has been the one-individual-firm acting on competitive markets, Posner (2010) has used as a benchmark the public bodies, including the nation states, from which the business corporation derived its status as a legal person. Compared to these public bodies, the business corporation has some advantages. The business corporation ended up with a legal personhood similar to that of other public organizations. However, it had an inner dynamism superior to that of other organizations

whose personalities were restricted to a territory (national states and their bodies) or to a specific mission (universities), or which required faith in particular beliefs (churches).

The business corporation has no territorial limitation, no specific mission, and no faith constraining its opportunities.

In spite of these advantages, the business corporation can still be regarded as a degenerate child of the public bodies from which it received its legal personality. Territory, mission and faith do not simply constrain personalities; they also define their identities. In case of non-human persons this is very important because it allows the humans supposed to act on the behalf of the non-human legal persons to identify with them. People may be ready to die to defend a territory, a mission or a faith, but they are unlikely to make heroic sacrifices for the success of a business plan. Posner points out that, when these identification mechanisms are strong, economic incentives may work in a counterintuitive manner. In the case of institutions like national armies, individuals may join them for patriotism or for monetary incentives. Paradoxically, lower monetary retributions may involve a selection of more patriotic individuals and raise the quality of the army. By contrast, few individuals are willing to sacrifice themselves for the Exxon or the Coca-Cola corporations. Hence, in comparison to the original public bodies, the business corporation lacks some fundamental intrinsic motivation mechanisms and, in this respect, it can be considered their degenerate child.

However, we cannot ignore that the related shortcomings of the parents offered the opportunity for the degenerate child to evolve. Paradoxically, extreme legal centralism and extreme market decentralization were two costly and interdependent institutions. Market transaction costs would often overlap with the State's bureaucratic costs. No institution is a free lunch. Some institutions enjoy a comparative advantage for some types of human interactions. Thus, there are no perfect benchmarks to which the business corporation should be compared. A rich ecology of different institutions could evolve to decrease the costs of organizing economic activities (Mazzucato 2013). The mix of institutions that has evolved in reality is not necessarily efficient. But idealizing the virtues of some pure institutions limits our understanding of history and our ability to suggest adequate policies of institutional change.

5. The Thing-Person Duality of Business Corporations

The hybrid nature of the business corporation can be clearly seen in its thing/person duality. Unlike ordinary commodities, and similarly to free individuals or to nations and to other public bodies, the business corporation can own other things and exchange them. However, similarly to ordinary commodities, and unlike free individuals or nations and other public bodies, the business corporation can be owned and exchanged as a thing (Iwai 1999).

In other words, the business corporation is a half-person (and half a thing). This dual nature of the business corporation is reflected in its limited capacity to make commitments. Like a person, it can commit itself to rules and to internal orderings, make contracts and enhance its reputation. Indeed, its potentially unlimited life makes it superior to physical persons, whose commitment is seriously limited by the fact that they are necessarily going to die. However, unlike physical persons and unlike other legal persons, such as nation-states, monasteries, universities, etc, it can be treated as a thing to make money and can be bought and sold in the market as a thing. However, commodities cannot command the same esteem and commitments of persons and, in turn, they cannot make commitments that real people are going to trust. Thus, if the thingness of the corporation invades all its personality, then some of its most important economic advantages fade away. Destroying the institutions in which the corporation is embedded may pave the way to the suicide of its personality (Polanyi 2001, Stout 2005).

Patient shareholders may derive long-term advantages from the fact that, as a person, the corporation can make commitments with other parties. However, in many circumstances, short-term shareholders can also gain from selling the corporation as a thing that does not have to honor those commitments. For some time, two different institutional arrangements could constrain the degeneration of the corporate personality into a mere thing. One prevailed in the US and the other in Europe ((Millhaupt and Pistor, 2008; Belloc and Pagano 2009 and 2013 Pagano 2012). These two different historical paths are related to the political conflicts that have characterized American and European histories.

At the time of the second industrial revolution, thanks to two major revolutionary

conflicts (war of independence and war of secession), the US had already successfully fought against the old European aristocracy and the slave-owning American farmers of the South. The development of large firms happened in the framework of a strong democracy. Large block holdings, present in more than one firm, were viewed with suspicion by early antitrust authorities (Sherman and Clayton Acts). F.D. Roosevelt dismantled pyramids by means of appropriate fiscal policies.

This “exceptional” early dispersion of capitalist interests made it less important to concentrate workers’ interests in strong unions and in social democratic parties. A *dispersed equilibrium* emerged.

The American *dispersed equilibrium* encouraged investment in the human skills of professional managers, the diversification of ownership, and the concentration of large amounts of capital in corporations. By contrast, it provided only very mild incentives for the human capital of owners and workers. The absence of family control and the extension of managerial hierarchies allowed the growth of large corporations. Ownership dispersion (and weak unions) and the independence of management allowed managers to make commitments on behalf of the corporation. In this way the corporation could not be easily treated as a thing and could often act as a reliable person.

The European countries (with the possible exception of Switzerland) followed a different path: at the time of the second industrial revolution, their societies were hierarchical and still permeated by aristocratic privileges. No democratic authority could limit the concentration of the power of the capitalist dynasties occurring with the second industrial revolution. A social-democratic reaction also concentrated workers’ interests. A *concentrated equilibrium* emerged in all these countries.

Thus, the European anti-degenerative medicine relied on stronger incentives for owners (and their heirs) to invest in the human capital necessary to run firms, and on their commitment to the corporation¹¹. Moreover, employment protection created conditions favorable to firm-specific investments also for some committed workers. In the European

¹¹ “Because the family is an organization in which socialization begins at birth and continues (at least nominally) until death, it has the potential to exhibit an intense unity that far outstrips that arising from *ad hoc* employment positions or membership stakes in a stock corporation. This characteristic is evident in firms of all dimensions, from the neighborhood restaurant to family empires like that of the Rothschild or Walton families”. (Donald 2016 p. 20)

case, the personality of the business corporation was saved from its “thingness” by its identification with the fate of the family dynasty and by the countervailing powers of the unions. The German codetermination system is perhaps the most prominent example of this type of anti-degenerative medicine.

Another anti-degenerative medicine is the ownership of substantial blocks of shares by Regions¹² or States. Being States and Regions reliable full legal persons they can take long term commitments and make the business corporation. In Italy the two largest companies (ENI and ENEL) are controlled by the State and most of the largest Chinese corporations are owned by People’s Republic of China and controlled by the Chinese Communist Party, “which directly controls appointment of senior management and indirectly controls their policies for the company” (Donald 2016 p. 25).

The growing financialization of the economy inhibits the effects of the anti-degenerative medicines of corporate personality. Financial pressure makes managers of Anglo-American corporations treat the corporation as a thing from which they have to extract the maximum value for their shareholders and disregard their commitments with other stakeholders. Financial pressure has a similar effect on European family dynasties, often unable to resist the temptation to sell their assets to raiders and to gain by breaking the commitments made on behalf of the corporation. The weakening of unions and the crisis of social democratic parties reduce the resistance to these opportunistic strategies. Finally, financial pressure can be very strong on State Owned Enterprises that are gradually privatized in many countries.

The recent development of financial markets has certainly been favored by the removal of the many barriers existing in the world economy. This has increased the power of the most mobile factors, especially financial capital, which can quickly exploit the most profitable opportunities. However, in our view, the growing financialization of modern corporation cannot be separated from the fact that a new form of capitalism has emerged because the nature of the assets owned by the business corporation has changed. This new form of capitalism – which can be termed *intellectual monopoly capitalism* – has attributed to the business corporation a different monopoly power that is not less

¹² For instance in the case of Volkswagen (whose major shareholder is Porsche which in turn a family-controlled firm) the Lander of Lower Saxony owns a substantial amount of shares and 20 per cent of voting rights. In this case family-ownership and codetermination are coupled with public ownership.

important than the monopoly power possessed at the time of the chartered corporations.

6. Intellectual Monopoly and Irresponsible Corporate Personality

In spite of its increasing sophistication, finance can only assign directly or indirectly some property rights on some valuable assets. An expansion of finance is favored by an extension of the assets on which those property rights can be accurately defined and enforced. Absent slavery, human capital cannot be included among those assets. We have therefore to deal with this puzzle. If the much (over-)claimed advent of the knowledge economy has involved a high intensity of human capital employed in production, then the ultimate basis for the expansion of financial claims should have decreased. This conclusion is puzzling because it seems to go against the financialization of the economy that we have witnessed during the last three decades. We can solve this puzzle only if we consider that the advent of the knowledge economy has come together with a massive privatization of knowledge.

In the years 1982-1999 a great change occurred in the nature of the assets used in production. Big corporations moved from being rich in machines (and numerous skilled workers) to being rich in intellectual monopoly. Patents, copyrights and trademarks now form the bulk of the big corporations' assets. This structure of corporate assets, which is a distinctive characteristic of a new form of intellectual monopoly capitalism, has greatly increased the assets on which financial claims can be made.

A dramatic revolution in the assets' structure took place in the 1980s and 1990s. In less than 20 years the percentage of tangible assets (houses, machines etc.) in the capital of the first 500 business corporations decreased dramatically, becoming about one-quarter of what it had been at the beginning of the 1980s.

The 1980 Bayh-Dole Act and the 1994 TRIPs agreement (an annex to the institution of the WTO) allowed the massive privatization of knowledge. Financial claims could now be made (and are increasingly made!) on intangible assets.

Corporations have exploited the huge economies of scale and of scope that arise when knowledge becomes a private input. They have also been able to decentralize production

to firms in low labor cost countries without the fear that independent competitors in these countries could use their private knowledge. The non-rival nature of knowledge, which could in principle favor small, and even self-managed, firms, is used to create artificial economies of size which make the cheap acquisition and the defense of property rights possible only for big business. Absent knowledge privatization, the need to provide incentives to invest in human capital would be an argument in favor of the labor-hiring-capital solution. Because of the monopolization of intellectual capital, the knowledge economy can become the unfriendliest environment for small labor-managed firms and an ideal setting for big corporations.

The commodification of intellectual capital gives a partial solution to the anti-commons problems that occur when to push further the technology frontier. Corporation's ownership of different complementary pieces of intellectual property encourages investment in the skills necessary to improve the knowledge that one already owns. The skills that are developed make it even more convenient to acquire and produce more private knowledge. Thus, big business corporations are more likely to enjoy a virtuous circle between firms' capabilities and their intellectual property. By contrast, other firms may be often trapped in vicious circles of under-investment in human capital where the lack of intellectual property discourages the acquisition of skills and the lack of skills discourages the acquisition of intellectual property (Pagano and Rossi 2004 and 2009).

The increasing commodification of knowledge has greatly expanded the set of assets over which financial claims can be defined and enforced. The knowledge embodied in human beings and the knowledge available as a public good cannot provide a basis for the growth of financial assets. By contrast, the knowledge that is privatized and transformed into firms' intellectual monopolies can be a powerful driver of the expansion of financial assets and allow the firm to be traded as a valuable thing on financial markets. Note that the growth of assets that can be included in financial capital can be completely disentangled from the growth of the economy because it involves a redefinition of rights on assets that could otherwise been part of the human capital of the worker or a collective good of society. By contrast, this change in the nature of assets may often fetter the development opportunities of society. In some cases, knowledge would be more productive if it was embodied in the workers or held as a public good

instead of a private monopoly. Increased financial wealth may come together with a decrease in the wealth of society and with a consequent huge increase in the share of wealth owned by financial capital¹³.

In turn, the financialization of the economy induces companies to commodify their intellectual capital. In an economy in which strong competitive pressure requires that one must be able to attract cheap finance, the company's structure of assets must be adapted for this purpose. The greater the intensity of private commodified knowledge relatively to other types of knowledge, the easier it is to attract cheap finance. Thus financialization and commodification of knowledge reinforce each other, leading to a mutation of the business corporation, coupling pervasive financial control with high intensity of intangible (such as knowledge-based) assets.

The “intangible” corporation has become a thing responsible to financial markets, and otherwise an irresponsible thing. Thanks to strong IPRs, production can be outsourced. Many stakeholders have lost rights in the corporation while they are still dependent on it in highly monopolized markets. Moreover, since its profits derive mainly from intellectual monopoly, the knowledge-intensive corporation is also a litigation-intensive thing, ready to explore all possible ways to defend and expand its intellectual monopolies against competing public and private claims.

The main advantage of legal personality now consists in the possibility to assemble large packages of complementary knowledge under the umbrella of a single non-human owner, partially overcoming the “anti-commons tragedies” of knowledge privatization. However, this partial solution of the anti-commons problem comes together with an even greater monopoly power of the modern corporation. It owns large bundles of complementary pieces of knowledge and, as a result, some future technological paths.

Paradoxically, the monopoly power of the modern corporation shares some characteristics with that of the old chartered corporations, such as the East India or the Hudson Bay companies. Chartered corporations had a monopoly on a limited (but fairly vast) territory. New corporations have a monopoly on a limited (but increasingly large and potentially global) field of knowledge. In some ways, their power is greater than

¹³ A rate of profit higher than the rate of growth (Piketty 2014) can be explained by the fact that the creation of financial wealth, obtained by monopoly profits, decreases the productive capital available to society (Stiglitz 2015, Pagano 2015).

those of the old corporations because national states now find it difficult to regulate their global intellectual monopolies. There is growing asymmetry between the power of the national states, with a monopoly power in many fields but on a restricted territory, and the power of the business corporations, which is restricted to a few fields but is not geographically limited.

According to standard economic theory, intellectual monopoly always involves some static inefficiency, but this static inefficiency may be compensated by the incentives that the acquisition of a monopoly gives to the producers of new knowledge. However, against this positive incentive effect, one should consider the negative effect that intellectual monopoly has on the intellectual investments of other firms; an effect that is particularly strong when innovative investments require complementary knowledge monopolized by other firms.

One can argue that corporations give a partial solution to problems that would arise if their rights on intellectual property were dispersed among different owners. In this case, the blockage of new innovations could be even greater. However, the investment blockage arising from their concentrated monopolistic power may still be sufficient to provoke a stagnation of the global economy and should also be compared with a situation where knowledge is supplied by a public authority. Unfortunately, in the global economy, a worldwide public authority is lacking, and all that the wisest national authorities can do is create some synergies between national research institutions and their firms.

However, the success of these policies is limited. Government funds become part of the revenues of the corporations that, acting in different countries, are difficult to tax. Moreover, the more corporations and their national governments co-operate in the production of proprietary knowledge, the more IPRs tend to become similar to global tariffs. A tariff limits the imports of the good in a single country. An IPR entails that the good cannot be produced by other firms and in other countries. The new emerging international division of labor is one in which countries cannot specialize in areas where they do not own IPR (Belloc, Pagano 2012).

Countries and firms with substantial packages of IPR fare relatively better than those deprived of technology ownership. However, the overall effect is an increasing global famine of innovative investment opportunities due to the blockages of investment

opportunities caused by intellectual monopoly restrictions. The reinforcement of IPRs has generated a dynamic process characterized by an initial boom and a subsequent crisis of investment opportunities. New stronger IPR have an immediate incentive effect because firms invest to secure monopoly rents. However, they later have a blocking effect. Each investment becomes riskier in an environment where much complementary private knowledge may be not available for new innovations. The dynamic of investments of the last two decades is consistent with this prediction of an initial boom and a subsequent crisis due to a reinforcement of IPR (Pagano and Rossi 2008, Pagano 2014).

After the reinforcement of intellectual property rights achieved with the 1994 TRIPs agreement, there was a total world increase of investments for about five years. However, after this initial boom, a continuous decline of global investments started in 1999, culminating with the recent global financial crisis. The roaring nineties were followed by the less glamorous first decade of the new millennium and, eventually, by the 2008 financial crisis and the following great depression.

It is a commonly accepted wisdom that the financial crisis was due to an excess of savings with respect to investments. While this situation has been described as a saving glut, the data show that the crisis was due more to a famine of good investment opportunities than to an increase in the propensity to save. The monopolization of the global economy contributed to this famine of investment opportunities. Unlike the crisis of 1930s, protectionism (in the new form of global IPR tariffs) may have been a cause instead of a consequence of the financial crisis.

A chain of irresponsible things is threatening the health of the world economy. The corporation acts as a thing in the hands of financial markets. It has been shaped to be the best thing for financial interests: a box empty of workers but full of intellectual monopolies. It is not responsible to workers or to national states. It exploits workers, who often belong to satellite firms working under its intellectual monopoly. It free rides on the national states, providing the basic knowledge on which private intellectual monopolies are sustained. *Intellectual monopoly capitalism* decreases investments, fetters innovation and increases inequality.

7. Conclusion

Business corporations derived their legal personality from full legal persons. Full legal persons evolved because of the human tendency to have strong commitments to super-human entities. However, unlike those super-human entities, the business corporation is a non-human person that is also a thing that can be owned and sold to make money. By centralizing market transactions, the business corporation can build a decentralized private order geared to making money for the individuals holding financial claims on the corporation. This duality of person and thing has some disadvantages. Powerful market incentives are limited, and the emotional commitment to the business corporation is also well inferior to the commitment that individuals have to full-blown non-human persons like national states.

The commitment to the business corporation, and its own ability to make commitments, has been further decreased by the financialization of the economy. The pressure of financial markets has weakened the two ways in which the business corporation could develop a credible personality: the continuity of management (mainly in the US) and family dynasties (mainly in Europe). The corporation has become an “intangible thing” with few workers and much mobile capital exploiting the most profitable global locations.

In the meantime, business corporations have gained a new form of monopoly. They started with charters granting them a monopoly on a certain territory. Legal personality was given in exchange for a charter setting a framework for the relations between the business corporations and the nation states from which they derived their legal privileges. Later, corporations were supposed to face competitive conditions, and charters were believed to be unnecessary. Free incorporation was allowed for all lawful purposes.

The new intangible-intensive business corporations again have substantial global monopolies, which are globally exercised on knowledge and technologies. However, no charter now limits their power. They can choose where to produce and where to incorporate. Traded as things in financial markets, their profitability ends up dictating charters to states, specifying what they can and cannot do to compete for their investments. This “chartering reversal” should be stopped. It is undermining the

development of the global economy and the democratic institutions.

Big business corporations enjoy unchecked global monopoly power in a world where political power is dispersed among many nation states. In this situation, the balance between the knowledge that is detained as private property and that the knowledge that is held as a public good is necessarily biased in favor of the former. Internationally protected intellectual private property rights are coupled with the absence of an international authority supervising the use of knowledge, which has always been one of the most important global commons of our species. Nation states can only make unbalanced deals with their own multinationals. They often free ride on the supply of human knowledge and cause a global under-supply of the most important human global common.

The damage extends well beyond deleterious effects on the global economy. While the dual thing/person nature of the corporation is shifting towards increasing thingness, the “chartering reversal” is transforming also nations into halved persons. They cannot decide their own policies. When they fail to comply with the implicit charters imposed by big business and financial markets, they must surrender their sovereignty to the international guardians of permissible economic behavior. They are becoming things that can be bought and sold like business corporations. This undermines democracy, which requires that the State be an independent legal person. The current rise of nationalism cannot be explained as the resurrection of the horrible ghosts of selfish ethnic pride. It also expresses a rebellion against a global economy without democratic accountability. The dark side of nationalism can only be fought by democracies that regain the status of full persons and are ready to cooperate with other democracies to make the deals that are required to run a global society.

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