GOVERNANCE OF TRANSACTIONS AND COMMON GOODS: WHAT LESSONS WE CAN DRAW FROM THE 2009'S NOBEL PRIZES AWARDED TO E. OSTROM AND O. WILLIAMSON

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2009's Nobel Prize in Economic Sciences was awarded to Elinor Ostrom and Oliver Williamson. Ostrom, an American political scientist with a Graduate school education in economics. was awarded for her analysis of economic governance, especially applied to the case of "common goods": how to manage and govern natural resource system and why some rules works in some setting and not in other. She studied whether and how the exploitation by users of common pool resources (a resource held in common among many individuals, such as forests, fisheries, oil fields, where well defined individual property rights are absent) can be organized in a way that avoids both excessive consumption and administrative costs. She explored the possibility that not only the two polarised solutions, privatization or enforcement imposed by an outside agency, be available, but also self-organization and identified the conditions under which the cooperation among users can be stable. Common pool resource systems - unlike public goods- are characterized by rivalry in consumption, since the use of one excludes the use of another, and face problem of overuse, but they are not excludable, since the costs of excluding potential beneficiaries from obtaining benefits from the resource pool use is too costly. So, common property resources are characterized by incomplete property rights. E. Ostrom, through a large set of case studies, compared sources of failure and success in self government and described some fundamental characteristics of successful common pool management schemes. She studied what factors are associated with the successful evolution of these institutions and with their equity and efficiency. It was necessary to get results from many different settings to start to improve the theoretical understanding of how institutions work and how individuals change their own institutions.She studied field-cases throughout the world, both in developed and developing countries, together with experimental studies conducted in laboratories. She analysed these cases through a common frame, including: what type of rules were used to regulate entry and use of these systems, what type of interactions resulted, and what outcome was obtained. As Ostrom (2009, p.419) wrote in Science: "*until recently, accepted theory has assumed that resource users will never self-organize to maintain their resources and that governments must impose solutions. Research in multiple disciplines, however, has found that some government policies accelerate resource destruction, whereas some resource users have invested their time and energy to achieve sustainability*". The rules that people follow emerge as an endogenous outcome, in specific contexts, instead of being taken as "given". Ostrom challenges the view that individuals, if not excluded from benefiting from the collective outcome, has little incentive to participate voluntary to the provision of that good and that temptations to opportunism can dominate the decision process and bring to failure.

Williamson was awarded for his analysis of economic governance, especially applied to the boundaries of the firm. His object was to work out the "efficiency" logic for managing transactions by alternative modes of governance- spot markets, various long term contracts (hybrids) and hierarchies. Whereas the orthodoxy took the distribution of economic activity across firm and market organization as given, firms and market can be properly regarded as alternative modes of coordination and it is necessary to explain on which this choice between alternatives is based. The specific contribution of Williamson was in finding out where the main comparative institutional action resides. Against simple market exchange, governance is predominantly concerned with "ongoing contractual relations" for which continuity of the relationship is a source of value: in fact, given that contracts are usually not complete, they need to be adapted to disturbances. Cost effective private mechanisms that have the purpose of mitigating contractual hazards, can be detected to assure that mutual gains from trade are realized (Williamson, 2005). Williamson attributes the contractual incom-

pleteness to bounds in rationality and the defection hazards to opportunism. The science of contract entails the effort of the immediate parties in a transactions to align incentives or to craft governance structures. In many instances the participants can devise more satisfactory solutions to their disputes than can professionals, constrained to apply general rules on the basis of limited knowledge of the disputes. That organization matters was little recognized by economists before Williamson with the exception of Marshall, Schumpeter, Hayek, institutional economist such as Veblen, Commons, Coase and organization theorists such as Simon and March.

Ostrom refers mainly to "social dilemma", situations in which private interests are at odds with collective interests. Social dilemmas have attracted a great deal of interest in the social and behavioural sciences. The most influential theoretical approach is economic game theory (using rational choice theory, expected utility and strategic interplay). Game theory assumes that individuals are rational actors motivated to maximize their utilities. Utility is often narrowly defined in terms of people's economic self-interest and game theory predicts a non-cooperative outcome in a static one-shot social dilemma. Elinor Ostrom used economic game theory as an important analytical instrument, showing that in repeated social dilemma games cooperation might emerge, because people can punish a partner for failing to cooperate. Reciprocity can explain why people cooperate in dyads. Theories of indirect reciprocity and costly signalling may be useful to explain large-scale cooperation: when people can selectively choose partners to play games with, it pays to develop a cooperative reputation. Also group identity may promote a long-term perspective on resource management, which makes it easier for people to sacrifice their immediate interest on behalf of their local community. Ostrom looked at how real-world communities manage communal resources (such as fisheries, land irrigation systems, and farmlands) and identified a number of factors conducive to successful resource management. One factor is the resource itself: resources with definable boundaries (e.g., land) can be preserved much more easily. A second factor is resource dependence: there must be a risk of resource depletion and it must be difficult to find substitutes. The third is the presence of a community: small and stable populations with a social network and social norms promoting conservation do better. A final condition is that there are appropriate community-based rules and procedures in place with built-in incentives for responsible use and punishments for overuse.

As in Ostrom (1990, p. 132-135), the whole list of design principles promoting stable local common pool resource management is:

1. clearly defined boundaries (exclusion of external non-entitled parties);
2. rules regarding the appropriation and provision of common resources adapted to local conditions;
3. collective-choice arrangements allowing most resource appropriators to participate in the decision-making process;
4. effective monitoring by monitors who are part of the appropriators;
5. a scale of graduated sanctions for resource appropriators who violate community rules;
6. mechanisms of conflict resolution cheap and of easy access;
7. self-determination of the community recognized by higher-level authorities;
8. in the case of larger common-pool resources, organization in the form of multiple layers of nested enterprises, with small local common pool of resources at the base level.

The term "governance" is no doubt the keyword joining Oliver Williamson and Elinor Ostrom research programs. In their approach governance can be quite well identified with the active capacity of social actors (single individuals, informal and formal groups, structured organizations, etc.) characterized by differential capacities (in terms of rationality, information availability, material and immaterial skills and assets, etc.) and motivations (self-interest, opportunism, altruism, etc.), to design institutional arrangements able to allow for a satisfying "coordination" of their heterogeneous and potentially conflicting goals. Managing conveniently social contexts featured by many stakeholders originates from the need to avoid "coordination failures", that is, unsatisfying and suboptimal "states of the world", where a given community might be locked in, although it would be better off under a different institutional agreement.

It is quite clear that the field of application of such a paradigm is as varied as social interactions are complex. Williamson and Ostrom offer

two perspectives on this issue, but, in despite of different contexts of application, the authors seem to approach fairly similarly the governance problems with regard to at least two aspects: (i) a great emphasis on arguments based on game theory, especially to deal with agents' strategic interplay, but without formal (mathematical) formulations of problems; (ii) an extensive reliance on contextual knowledge and factual analysis from accurate and detailed case studies. The eclectic methodological approach of both the authors leads them to enrich this approach by arguments, suggestions and insights coming also from disciplines other than economics such as political science, sociology, anthropology and psychology, although economics remains at heart of their research endeavours.

But where can we find the common roots of this scientific approach to governance analysis? Although many scholars and schools can be enumerated among those influencing them (such as, for instance, the "American Institutionalist school" and the "Behaviouristic school"), an essential theoretical and methodological legacy might be identified in the antecedent works of another Nobel prize awarded economist, Ronald H. Coase. Williamson was more affected by the Coase pioneering paper on "The Nature of the Firm" of 1937, and Ostrom probably more influenced by what Coase set out in "The Problem of Social Costs" of 1960. Both papers deal with governance as abovementioned, but from two different perspectives roughly coinciding with the two authors' field of interest.

"The Nature of the Firm" is the paper where Coase elucidates for the first time the concept of "transaction costs" defined as the costs of using the "market" rather than the "firm" (i.e., a hierarchical structure) to reach coordination of economic transactions. The idea is quite simple: when the cost of impersonal market exchanges - guided by the system of prices - is too high (since uncertainty, lack and asymmetry in information and opportunism are present), the substitution of impersonal exchanges with hierarchical constraints would be a less costly option to coordinate individuals. On the wake of this seminal idea, Williamson specifies more in depth and tries to operationalize the concept of transaction costs, to explain the emergence and comparative advantage of alternatives institutional modes, such as: long-run contracts, franchising, mergers, full or partial vertical and horizontal integration, and so on. Asset specificity, frequency, number of subjects involved in the agreement and uncertainty are the basic factors explaining the magnitude and spread or transaction costs.

"The Problem of Social Cost", instead, deals with coordination in presence of externalities, the case in which the welfare of an individual is affected by the behaviour of others. Before this paper, economists generally were relying quite faithfully on the Arthur C. Pigou conclusions drawn from his The Economics of Welfare of 1932. In this book Pigou shows that, in order to solve inefficiencies generated by pervasive (positive and negative) externalities, a direct Government intervention into the economy was needed. By providing incentives and penalties to producers and consumers via subsidization, taxation and suitable laws, Government may guarantee an efficient provision of goods affected by an externality problem. Viewed as a deus ex machina State action was thought of as always effective in promoting welfare-improving allocations, although many real cases showed sometimes the contrary as "Government failures" may occur too. "The Problem of Social Cost" challenges harshly this statement, by showing that: under (i) nil transaction costs, and (ii) well defined property rights assignment, parties involved in an agreement are always able to reach an efficient allocation of resources by freely trading rights. Coase recognized the importance of an until then overlooked aspect of capitalist economies: people do not only trade goods and services, but also the right to use them in a specified way. Finally, the so-called "Coase theorem" adds the corollary stating that it is not important to which party the right to do or not do a specified use of the good is assigned, since parties can in any case trade this right by find a mutual advantageous allocation.

Common goods, as rival but non-excludable goods, are by definition commodities and resources affected by an externality problem. The Garret Hardin "The Tragedy of the Commons" paper published on Science in 1968 had showed how the non-excludible nature of this type of goods can lead to an inefficient and over-exploiting use of (natural and non-renewable) resources. This happens because the single user - acting according to his own interest – generates a negative externality in the consumption of other users. As there is not a price (or a right) to

exploit common resources until a certain limit, whoever wishes to forage as much as he can, regardless of what other people do. This behaviour generates a kind of externality taking the form of an individual depredation higher than the social optimum, in so generating a "social dilemma" type of inefficiency. Overall, this phenomenon can lead to the whole depletion of the common resource (i.e., the "tragedy").

Under the conditions of the Coase theorem, i.e. nil transaction costs and well assigned property rights, the tragedy can be effectively prevented. But what occurs when pervasive high transaction costs are present and when, by definition, exploitation's rights are (technically or socially) difficult or impossible to be assigned, as in the case of common resources? Are we condemned to the tragedy or is there some hope to escape this sad perspective? Herein we find the Ostrom's research program as an extensive and powerful undertaking to shed light on doubts risen by these questions.

Elinor Ostrom is interested in what happens when the Coase theorem requirements are not met. Although the author starts from a description of the human being quite consistent with the rational self-interested agent of game theoretical models, her approach is open to incorporate various other aspects of the human behaviour comprising aptitudes to cooperation, social responsibility and docility to informal social rules. What Ostrom wants to point out is that, although limited in the operation of his rationality, in information disposability, and although looking at his interests first, human beings are able (or can be able) to cooperate and find satisfactory agreement to be better off and avoid resources' excess exploitation. It can happen thanks to the capacity of agents of "self-organize" their activities without the need for State direct intervention and without defining property rights. As presented above, she suggests the conditions under which the emergence of cooperative states of the world could occur, showing also the cases in which this coordination has failed. But the main message brought to the scientific community remains that – regardless of what predicted by theoretical models – occurrence of tragedies has been largely disconfirmed by evidence from a great number of real cases. What is at heart of her argument is recognizing that lasting cooperation is achievable in the real world, although starting unfavourable conditions.

Here is what probably differentiates Ostrom from Williamson. According to Williamson, opportunism is central and defined as "*interest seeking with guile*": human beings are depicted as inherently self-interested with no aptitude toward cooperation. By contrast Ostrom, even though recognizing the central role of opportunism too, seems to believe in the existence of a special aptitude of human beings consisting in a meta-preference toward cooperation with other humans. Certainly, social environment can promote or hampering, depending on the circumstances, the operation and development of this meta-preference, but what is essential is to recognize the "possibility" of cooperation. Of course, what emerges from Ostrom's writings is an "optimistic" vision of the human spirit, endowed with a spontaneous capacity to react to what Thomas Hobbes' The Leviathan depicted as his innate "homo homini lupus" attitude. In short, thanks to the Nobel Prize awarded to Elinor Ostrom a "third way" – different from the Market and the State, as generally set up one against the other – i.e., the "self-organization" of social and economic activities, enters rightfully the front door of the economics' scene.

Three main issues for policymaking emerge from the contribution of the two authors:

(i) relevance of governance: institutions are necessary to monitor and regulate the market, given information and power asymmetries. These institutions can be based on a shared sense of responsibility and accurate knowledge;

(ii) local development and self-organization capacity: emphasis is put on the relevance of the community, on participative democracy and shared rules, where trust, reputation and social capital are key-components. In large contexts, where the globalisation introduces more complexity for the emergence of self-government, such as in environmental problems where many actors are involved, Ostrom proposes a polycentric approach, where key management decisions should be made close to the scene of events and the actors involved. There are local public benefits that people can receive at the same time they are generating benefits for the global environment;

(iii) third sector: self-organization and cooperation are promoted by "voluntary" actions based on motivational aspects different from

self-interest. The development of a cooperative sector (non-profit or third sector) beside market and public agencies can better promote the achievement of coordination in many contexts characterized by "social dilemmas".

Finally, an important lesson for today which we can draw from the two scholars is the necessity of building more cooperative institutions for regulating financial markets, whose way of functioning have produced in the recent years a general crisis of trust, and the possibility of an enhanced management of collective goods, such as environmental resources.

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