CO-OPERATION AS COORDINATION MECHANISM

a new approach to the economics of co-operative enterprises

Ermanno Tortia

University of Trento and Euricse

ermanno.tortia@unitn.it

Carlo Borzaga

University of Trento and Euricse

carlo.borzaga@unitn.it

Abstract

The economics of cooperative and social enterprises, as developed in the past and especially as referring to worker co-operatives, needs deep revision and refinement following the evolution of economic theory over the last decades. Traditional approaches are often based on hypothesis derived from mainstream theory and results are incoherent or inadequate to interpret the real behaviour of these organizations. The main flaw is that economic theory has so far not assessed co-operation as co-ordination mechanism of the economic activity, especially in the organizational realm. Complementary, contemporary economic approaches did not deliver satisfactory interpretations of new and emerging phenomena, such as the spread of social co-operatives, social enterprises and other hybrid organization forms that do not pursue profit as their dominant objective (the exclusive interests of members). The stronger attention paid to this emerging literature in line with institutionalism, that are closer to new approaches and methodologies (especially behavioural and experimental economics) spread over the last decades. We aim at creating a new framework of analysis, and overcoming unsolved problems and unanswered questions, offering new guidance to empirical and experimental research.

Key words: cooperation; cooperative enterprises; coordination mechanism; hierarchy; market; hybrid organizational form.

JEL codes: L21, L23, P13

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"… the term "paradigm" is used in two different senses. On the one hand, it stands for the entire constellation of beliefs, values, techniques, and so on shared by the members of a given community. On the other, it denotes one sort of element in that constellation, the concrete puzzle-solutions which, employed as models or examples, can replace explicit rules as a basis for the solution of the remaining puzzles of normal science." Kuhn (1962, Structure of Scientific Revolutions, p. 175):

1. Introduction

The neo-liberal model has entered a crisis in recent years, starting in 2008 with the bankruptcy of Lehman Brothers. In order for a new paradigm to emerge, more convergent factors must be involved, of which one – one among others, even if important - is constituted by the evolution of economic theories (introduction of new theories and improvement of existing ones), which do not have the exclusive function of legitimizing the existing paradigm. Theoretical evolution needs to go hand in hand with the development of new frameworks of analysis and testable hypotheses, representing both a pull and push factor in science. Theoretical evolution can inform organizations and their evolution when it is properly contextualized in the study of the institutional setup and governance structure. This paper deals with those theoretical evolutions which took place over the last decades, especially within institutionalism, evolutionism and behavioural economics, that are better able to explain organizational structures and their evolution, especially the evolution of non-conventional organizational forms, such as cooperative and social enterprises.

There is a sufficiently developed and shared theoretical body capable of proposing an alternative economic paradigm that can help solving long lasting economic challenges, especially during periods of crisis. While traditional orthodox theories have been focussing on market failures, out approach starts from the presupposition that markets are never perfect and, instead, are to be interpreted as one among several coordination mechanisms, for example hierarchical control and cooperation or collective action, and interact in a complex way with these mechanisms. Market failures are nothing but a special case of coordination failure, a case in which other coordination mechanisms may not be properly utilized and integrated with market exchanges. For example, the inability of markets to produce adequate amounts of public goods can be interpreted as inability to resort to collective action and cooperation as dominant and enabling coordination mechanism.

New theories (partially) re-evaluate the role - regulatory or interventionist - of the State, but also that of private non-investor owned institutions like traditional cooperatives other forms of enterprise, like socially oriented cooperative forms and social enterprises (non-profit firms such as foundations, associations and other third sector organizations). This is so also because market failures do not reduce State failures that emerged both before and after the start of privatization processes. Before privatization the inability of the State to proactively invest in the development of social services and cost inflation was evidenced. After privatization, several instances of contractual failures in public-private partnerships (implemented through public tenders and procurement) have been emerging. The failures were underlined by new-institutional economics starting from the seminal contributions by Weisbrod (1970, 1977) and Hansmann (1988, 1996).

Emerging theories also criticize the assumptions underpinning orthodox theory, which see in the self-interested maximization of individual well-being the sole driver of economic behaviour. Many contributions from social psychology have dealt with economic behaviour, both self-interested and altruistic, even with the use of experiments. Experimental results have shown that human behaviour is complex and includes both self-interested and other regarding components. The new approaches highlight how, in economic transactions, there are significant (sometimes predominant) motivations that are different from the reductionist and highly simplifying assumptions of orthodox economics: trust, reciprocity, solidarity, availability to the gift, altruism, empathy, attention to distributive justice, willingness to pay voluntarily even for goods that could be consumed for free.

These approaches seem to lead to a more general hypothesis: that "cooperation" - that is the ability of groups of people with a common problem to start collective actions to deal with specific economic problems and solve them by assigning the relevant tasks, setting up the working rules (which will be different from those of the market and the state) and distributing the rewards, emerges as one of the dominant coordination mechanisms between agents motivated by a mix of self-interested and non-self-interested motivations. A very widespread idea at the beginning of the industrial revolution (cfr works by John Stuart Mill, Alfred Marshall, Leon Walras etc…), it is relegated nowadays to the role of sheer exception, but it was re-evaluated at the beginning of the current crisis.

The increasing importance of cooperation is visible in:

1) in the progressive strengthening of traditional cooperative and associative organizational forms both in sectors where they have always been present - such as agriculture - and in new areas such as social and general/community interest services, with the emergence of a plurality of cooperative or associative forms that are finding new responses to different and emerging needs.

2) in the changes in the relationships of companies with their workers towards a less contractual and increasingly cooperative modes of industrial relations. This trend includes corporate welfare measures or voluntary economic support in favour of employees, which represent forms of "pre-distribution" of income aimed at containing the growth of inequalities;

3) in the evolution of corporate social responsibility to take on voluntary, explicit and strategic responsibilities in social and environmental matters, which can be included in their statutes and protected by trademarks (eg the case of the B-Corps) or bylaws (as in the case of benefit companies or US Low Profit Companies);

4) in the growing number of private financial institutions working with ethical and sustainable funds, that deny resources to sectors characterized by negative social or environmental impacts and privilege investments with "positive (social or environmental) impacts";

5) in the growing tendency of firms to collaborate in place of competing as in the case of industrial districts and networks (both formal and informal) between companies (Sacchetti and Tortia, 2016);

6) the growing attention paid to the study of cooperative forms of governance, starting from the seminal contributions by Ostrom (1990) on the management of common pool natural resources.

Non-self-interested motivations in economic action and the cooperative mechanisms are assuming an ever-greater significance and an ever more articulated and widespread presence. Cooperation is the coordination mechanism that appears best able to manage plural motivations and to bring within economic exchanges dimensions of the human personality different from the search for individual well-being of a material kind.

In particular, to affirm that cooperation is a mechanism of coordination on a par with state authority and market exchange is tantamount to maintaining that there are transactions or conditions for which cooperation is more efficient (implying lower transaction costs) or more effective (implying higher generated economic or social surplus) than alternative mechanisms. In particular, those mechanisms requiring coordination of complex interests (self-interested and other regarding) and of actors characterized by interests and goals that are at the same time converging and competing.

Even if we do not underscore the importance of co-operation in different economic and social contexts, most notably in the working of markets, in organized collective action (economic and non-economic), and in investor owned enterprises, our work focuses on organizations and enterprises in the social economy, most notably on those non-conventional mechanism of coordination of the economic activity and governance forms that allow these emerging organizational forms to achieve economic, financial and social sustainability (financial mechanisms, capitalization, governance, managerial models and organizational routines). This thread of our work aims, as it final objective, at integrating in a systematic way cooperation with market exchanges and hierarchy in the study of the working of the economy

2. Existing theoretical traditions

The economics of cooperative and social enterprises, as developed in the past and especially as referring to worker co-operatives, needs deep revision and refinement following the evolution of economic theory over the last decades. Traditional approaches are often based on hypothesis derived from mainstream theory and results are incoherent or inadequate to interpret the behaviour of these organizations. The main flaw is that economic theory has so far not given a convincing view of co-operation as co-ordination mechanism, especially in the organizational realm. Complementary, contemporary economic approaches did not deliver satisfactory interpretations of new and emerging phenomena, such as the spread of social co-operatives, social enterprises and other hybrid organizational forms that do not pursue profit as their dominant objective.

A critical review of economic theory is in line with institutionalism and with other heterodox approaches and methodologies, which spread over the last decades, especially evolutionary and behavioural economics. Our approach aims at creating a new framework of analysis, at overcoming unsolved problems and unanswered questions, offering new guidance to empirical and experimental research, and to policy advice. In this, we study the operation of three coordination mechanisms instead the traditional continuum of market vs hierarchy.

One fundamental seminal contribution is found in Elinor Ostrom's approach to the governance of common pool natural resources. In our work, an initial attempt to pin down such themes and develop them within the theory of industrial organization is carried out. Expected outcomes include new interpretation of traditional and new cooperative and social enterprises and other new entrepreneurial not for profit organizational types. The underlying idea is that, in order to understand their economic and social rationale the autonomous and specific role of cooperation in coordinating economic agents needs to be taken onboard.

2. The state of the art

The theme of the spontaneous emergence of co-operation as an autonomous coordination mechanism of the economic activity is experiencing growing interest among economists, business economists and social scientists. According to several authors, various forms of cooperative economic relations had limited importance in the past decades, but their presence is increasingly detected and expanding in present days economic systems, both at the individual and collective level as well as within companies. Arguably, the implication is that three different coordination mechanisms are at play in economic transactions: market exchange, that is gain from trade, as defined by Heath (2006), authority, and co-operation. In much the same way, enterprises can be interpreted as tools directed to organize the production of goods and services mixing in different proportions all the three mechanism. Enjolras (2009) studies the nature and institutional features of cooperative governance in voluntary organizations, which has the potential to reinforce norms reciprocity by pooling resources and setting social ends in a formal way. Residual claims, decision-making procedures, accountability, checks and balances, control procedures, and embedded incentives are geared to facilitate collective action, public or mutual interest and advocacy. Voluntary organizations operate in complex social environments by mobilizing resources from market operations, governmental subsidies, volunteering and donations. Their governance mitigates coordination failures inside the organization (hierarchy) and in the social environments (in market exchanges). The need to pay more attention to cooperation in economic transactions is also the main reason for the decision to award the Nobel Prize to Elinor Ostrom in 2008, and also the need to account for different entrepreneurial forms has been recently suggested also by prominent economists not specialized in the study of social economy organizations, such us Stiglitz (2009) and Piketty (2003).

Our contention is that theoretical flaws in understanding the functioning of both the modern economies and all forms of enterprises and relationships among economic agents are to be ascribed to the consideration of only two main co-ordination mechanisms of the economic activity: exchange of equivalent values on the market and authority, or hierarchy. Market exchange is the sole or largely predominant mechanism for orthodox economic theories that take perfect markets as a condition that is either already given or that will generally be achieved by means of competition and/or regulation, except in the case of few public goods. At the same time, most of the approaches that recognize the presence of market failures, first of all the neo-institutional theories (Williamson 1973, 2000) tend to consider the sole alternative of authority, both private and public. In fact, the underlying model is always populated by only two actors: State end Market. When the role of enterprises is considered it is again described as a combination of different mixes of contracts (another expression of the "gain from trade" paradigm) and authority or hierarchy. On the contrary, the mechanism of cooperation is rarely given importance even when the aim of the analysis is the explanation of the existence and the functioning of cooperatives enterprises. When they are considered an inefficient legacy of the past – as in Ward - they are explained not as the result of free and autonomous choices of involved actors (members) to cooperatively solve a common economic problem existing in the absence of markets, or when markets are marginal or non-existent, but as consequence of failures in the working of markets.

We believe that a better understanding of the functioning of our economies, of the traditional cooperatives forms and of many new forms of economic transactions and new forms of enterprises is possible only if cooperation is considered as an autonomous coordination mechanism as compared with the other two. These elements are introduced in our interpretative model of the economic interactions, in which the market is not necessarily the best coordination mechanism, and authority is not always the best alternative to the market, as public choice theory claims. This is due to the persistence of market failures and power, contractual imperfections, and limitations, and of the connected transaction costs (Ostrom 1990) and to their increase in many emerging service sectors. Market exchanges are not always conducive to optimal processes of production especially when intertemporal accumulation of knowledge and collective action are needed to achieve the desired social and economic goals (Langlois, 1992; Loasby 2006). Knowledge accumulation, as increasingly embedded in people and not in the equipment, has the potential to generate dynamic transaction costs and modify the boundaries of the firm.

At the same time the possibility to rely on the traditional authoritarian forms of coordination are depleted both by the reduced availability of public resources and by the difficulty of controlling knowledge workers. On the contrary we think that co-operation is able to introduce new ways to pursue economic objectives and to govern economic transactions since it emerges when a collective of economic actors voluntarily decides to join efforts and resources to increase welfare beyond what independent action would guarantee. Transactions managed through co-operation take place, not on the basis of an authority relation, but voluntarily and, differently from market exchanges, the participation in the transaction depends not on the equivalence between contribution and outcome (in terms of economic value), but on the reciprocity principle (Zamagni, 2005). Due to the uncertainty surrounding the results of many economic interactions, co-operation helps develop transactions when, under the veil of ignorance, equivalence between contribution and outcome can be expected, but not guaranteed, on the basis of fair procedure. In cooperative interaction, under the veil of ignorance, participants would coordinate their actions and choices around fairness norms that *they choose*. Hence, they would not accept norms that are deemed unfair. Given these premises in this paper we consider cooperation as third dominant coordination mechanisms, besides the market and public (state) and private authority. Among the already existing approaches that consider cooperation as relevant economic behaviour inside and outside organizations, our approach can be innovative in understanding if (i) cooperation can be equated and compared to market and hierarchy as one of the most widespread coordination mechanisms; (ii) in this perspective cooperation can allow a better understanding of the working of the economy; (iii) especially if in this way we can better explain the working of some specific organizational forms, such as cooperative and social enterprises; (iv) finally if we can better understand recent organizational and production forms, such as creative and digital commons.

The paper is organized as follows. In the first paragraph we better define the concept of cooperation. Here are presented the theories or the researches that have considered or are calling to consider the importance of co-operation as coordination mechanism. Finally we present, in comparison with the three coordination mechanisms, the advantages and limitations of cooperation and we propose some ideas for future research.

2.1. ***Co-operation as specific mechanism of coordination***

The recognition that collective action based on voluntary co-operation can be as much, or more, effective than market exchanges and hierarchy in achieving efficiency spread only recently, thanks to increased attention guaranteed by the Nobel Prize to the pioneering works by Elinor Ostrom (1990). She showed how, in the case of the management and exploitation of common pools of natural resources, co-operative effort under some conditions can represent a more efficient alternative to both public and private ownership (Ostrom and Basurto 2011). Following Ostrom approach spontaneous co-operation as a mechanism of associative nature, based on the mutual benefit of the participating actors and on trust and reciprocity as supporting behavioural dimensions, is added, in the realm of production and entrepreneurship, to market exchange and hierarchy, which have been sharing the dominant role in transmitted economic approaches (Williamson 1973, 1975). Elinor Ostrom applied the same approach also to explaining the organization of local public services and other forms of "public entrepreneurship". Other authors also considered the social advantages of associative and communitarian forms of governance (Valentinov 2007). Finally, this approach has just been applied to the study of enterprises, especially to co-operatives (Sacconi 2015, Sacconi and Ottone 2015, Tortia 2015).

Voluntary co-operation, as evidenced in the works by Joseph Heath (2006), can deliver adequate coordination without resorting to exchange or authority, or by using them in a functional and limited way. Market exchange is overcome because the parties do not exchange equivalent ownership rights on goods or services, but act on the basis of collective projects and shared objectives. Collective objectives are pursued, in many instances, on the basis of common forms of ownership, or inherited as the commons or created as it happens when the asset lock is imposed by law, or it is accepted voluntarily by the cooperative, likening it to a common resources (i.e. a rival, but not excludable resource). Similarly, authority is also absent since co-operation is understood as horizontal coordination and, in its basic working, cannot be reduced to vertical relations between a dominant and a subordinate individual or group. In co-operative coordination, mutual benefit is pursued in order to increase welfare for the involved parties, and is sustained over time by exploiting existing trust relations, or by generating new ones, and by reciprocating behaviours (Sabatini et al. 2014). This form of social interaction either increases the total surplus produced (the production function is super-additive) or reduces possible costs that would arise in the absence of co-operation—for example, the costs of conflict, of opportunistic behaviours, and of negative externalities (Borzaga and Sacchetti 2015).

Co-operative effort or contribution can be and it is often arranged before the achievement of the expected results. Insofar as the results are not controllable ex-ante, co-operative interaction is only partially enforceable, and implies that a precise equivalence between contribution and reward, which characterizes the exchange mechanism, cannot be guaranteed. The non-perfect predictability of outcomes and of distributive patterns requires that fundamental behavioural dimensions such as fairness, trust, and reciprocity acquire, in co-operative co-ordination, a more fundamental role than in other coordination mechanisms. Fairness becomes a necessary criterion in the evaluation of the quality of co-operative interaction, in accomplishing equitable distribution of outcomes, and in supporting participation in collective action (Guth et al. 1982, Kahneman et al. 1991, Tyler and Blader 2000). Consistent forms of governance become strategic to guaranteeing these outcomes. As relevant oft-cited application, egalitarian wage structures do not represent anomalies any more, but can be correctly explained in terms of procedural and distributive fairness (Frank 1984, Leete 2000; Borzaga and Tortia, 2006; Tortia, 2008). Trust acts as facilitator and as transaction cost-reducing behavioural pattern. A significant degree of trust is necessary to support the ex-ante expectation that co-operative interaction will lead to mutually beneficial outcomes. Positive reciprocity, on the other hand, has been envisaged as the main mechanism through which fairness and trust are preserved, sustained, and invigorated over time (Axelrod 1984, Akerlof 1982, Fehr et al. 1993, Fehr and Gächter 2000, Zamagni 2005). Coherently, while opportunism is taken by all orthodox approaches to be one dominant behavioural trait in principal–agent interactions, and in relations among economic agents and conventional enterprises more generally (Alchian and Demsetz 1972, Williamson 1973), when co-operation becomes dominant, opportunism is downgraded to a non-fundamental behavioural distortion that can be tamed and overcome by proper working rules and governance solutions (Sacchetti and Tortia 2015).

A conception that also an enterprise can be based on the co-operative mechanism refers primarily to the role of intrinsic motivation and non-self-seeking preferences (in line with deCharms, 1968 and Valentinov, 2007), while horizontal coordination based on trust, reciprocity, and fair procedures cannot be excluded any more (Fehr and Gächter 2000). This conception can be applied to co-operative firms, but also to other organizational and proprietary forms (private and public).

Co-operation as crucial coordination mechanism in the organization of production has already been evidenced in several contexts, although to different extents and with different strength (Grandori, 1997a, 1997b, 2008). For example, voluntary organizations require spontaneous co-operative effort as driving force and cannot be managed by way of hierarchical control or market exchange in order not to dampen the intrinsic and pro-social motivations of volunteers (Titmuss 1970, Deci 1975, Rose-Ackerman 1996, Frey 1997, Ryan and Deci 2000). The relevance of co-operation is evident also in the case of donations, where horizontal coordination of donors mediated by the relevant non-profit entity is unavoidable if the public benefit aims are to be reached. As said, collective action emerges as the crucial coordination mechanism in the literature on the management of common pool natural resources and on the delivery of local public services (Ostrom 1990). Similar remarks concern the production of new knowledge in contemporary ICT services, through the development of open-source software and publicly available online resources such as Wikipedia and Creative Commons, which lowered ICT production costs and made the software industry less concentrated (Rifkin 2014; Benkler, 2017; Heath, 2006). Finally, the understanding of cooperation as autonomous coordination mechanism allows interpreting the features and the functioning of cooperatives enterprises in a more satisfactory way (Borzaga, Tortia, 2017). Cooperation needs to be distinguished from collaboration. The Aristotelian meaning of cooperation, in its etymology as “operate together” is stronger than the simple meaning of “working together” (Bruni and Zamagni, 2007; Zamagni, 2010).

3. The coordination role of cooperation, as compared to market and hierarchy

In this section we attempt a critical reconstruction of those theories and framework of analysis that can allow to locate and correctly interpret the cooperation mechanism. While our theoretical reconstruction cannot be exhaustive, we hope in this way to pinpoint some crucial elements, and connect then with those authors and approaches that most thoroughly dealt with them.

Game theory has abundantly occupied itself with the problem of cooperation among economic agents. In this paragraph we recall the different ways in which this particular theoretical body has treated cooperative behaviours. In other words, while we cannot be exhaustive, we will focus on some specific frameworks and results that are relevant to our objectives.

3.1. The spontaneous emergence of cooperation in one-shot and repeated games

Classical failures in cooperation, especially in the prisoner's dilemma game, but also in games based on trust, and on contractual or decision making power, have attract intense attention and extensive analysis (cfr. the seminal contributions in these fields of enquiry: Runciman and Sen, 1965; Guth et al., 1982; Berg et al., 1995).

The overcoming of the classical failure in cooperative and mutually beneficial behaviour in the prisoner's dilemma found three main directions in research. First, the spontaneous emergence of the cooperative solution, as based on strategies that include reciprocating behaviours as mechanism supporting cooperation in the repeated game (Axelrod, 1984). Second, the possibility of cooperative behaviours both in the one shot and in the repeated version of the game, in the absence of contractual constraint. Trust has been interpreted as a behavioural propensity to accept the risk of opportunistic behaviour by the other players in the social interaction and the related costs on the basis of emotional perception of their willingness to reciprocate cooperative attitudes (Brosig, 2002). This line of enquire has been extended and deepened by psychological game theory (Harsanyi, 1967; Harsanyi and Selten, 1988; Colman, 2003; Sacconi, 2012), which dug into the psychological backbone of cooperative behaviours, developing theoretical models that are able to explain conformity to fairness principles in contrast with self-seeking behaviours and instrumental rationality. Third, in the absence of cooperative behaviour the overcoming of the prisoner's dilemma can be guaranteed by the institutionalizations of constraints and sanctions, as for example in public goods theory (Runciman and Sen, 1965).

3.2.1. Spontaneous cooperation based on instrumental rationality

The possibility of instrumental rationality leading to cooperative behaviours in repeated games showed as cooperation can emerge spontaneously and in a purely rational way. However, at the same time, the unrealisticness of assumptions concerning purely rational strategies in repeated games (backward induction solutions and defection as dominant strategies) and the difficulty to identify optimal strategies lead to the utilization of simulation and experiments as prevalent methodologies (Flood, 1952; Axelrod, 1984; Embrey at al., 2017). The identification of the tit for tat strategy as complement and alternative to backward induction in delivering at least partial cooperative behaviours also in finitely repeated games brought reciprocity into economic theory as the dominant mechanism able to explain the emergence of cooperation.

The spontaneous emergence of cooperation is also fundamental in the explanation of the emergence of conventions, since cooperative social patterns can become self-reinforcing when all the involved players recognize the advantages deriving from cooperation, and can act to achieve them under the reasonable expectation that all (or almost all) the other players will do the same. Conventions can become general tendencies of society and lead to Pareto superior social outcomes when they are recognized as the dominant pattern of behaviour by most economic agents. This can happen following evolutionary patterns, without the need to resort to any behavioural assumption concerning trust any reciprocity (Sugden, 2005).

3.2.2. Cooperation based on trust and reciprocity

In the second stream of enquire, in the trust game (Berg at al., 1995), trust emerges as possible mechanism supporting cooperation in sequential games, such as investment behaviour and long term relationship based on sequential moves. Finally, (negative) reciprocity emerges as fundamental behavioural mechanism also in the ultimatum game (Guth at al, 1982) in guaranteeing the possibility to achieve fair distribution and division of surplus. In more general terms, cooperation has been explained as possible emergent feature of social interaction, especially in repeated games. This spontaneous emergence, however, is possible only based on strategies characterized by both positive and negative reciprocity, that is on the punishment of defectors as punishment of deviant and opportunistic behaviours. This is clearly so in the repeated prisoner's dilemma and, in n-persons games, in the production of public goods.

3.2.3. Cooperation based on conformity to predetermined and agreed on norms

Psychological game theory (PGT hereafter), in our perspective, strives to explain how rational actors can choose to cooperate in a spontaneous way, even in one shot games, even when economic incentives make defection the dominant strategy, as in the one shot prisoner's dilemma. While the emergence of conventions cannot be able to explain cooperation in one shot games characterized by dominant strategies of defection, PGT introduces a modified utility function, in which players are not any more driven by self-seeking motivations. This kind of motivation is coupled by a second psychological component, which, instead, leads players to value and weigh positively the fairness of the distribution of outcomes. When this second psychological component is strong enough, player tend to conform to a norm of fair distribution, which counterbalance the tendency to always choose the highest possible payoff, given the optimal choices of the other players, and to defect when this is required to achieve such outcome. Conformity to norms of fairness leads to the definition of so-called conformist preferences, which represent the outcome of both self-seeking and other-regarding drives. Psychological Nash equilibria clearly show that cooperation can be achieved even when material incentives make defection dominant. On the other hand, the cooperative equilibrium can be achieved only when the psychological component in supporting conformity to fairness norms is strong enough. This is never guaranteed. Hence, the evaluation of the effectiveness of the psychological component in supporting the cooperative outcome becomes and empirical issue. PGT demonstrated its own strength just in showing that several well-known experimental results (for example as concerns the ultimatum game) can be quite readily explained by resorting to psychological utility functions versus more traditional ordinal or cardinal utility functions exclusively based on self-seeking, most of the times in the consequentialist approach (Sacconi, 2012; Schwartz 2014).

3.2.4. Formal institutions as solution to the failures of cooperation

The fundamental results connected to trust and reciprocity and to PGT gave spontaneous cooperation a fundamental role in social and organizational interaction. Its potential to resist cases of abuse and opportunism, however, has been considered fragile, for example because of the absence of the possibility to enforce cooperation and to sanction defectors. The analysis of spontaneous cooperation has indeed been complemented by the study of the role of institutional constraints as necessary complement to achieve socially beneficial outcomes through the real working of the economy. In a seminal contribution, Runciman and Sen (1965), first envisioned the possibility that the dominant strategy of defection in the prisoner's dilemma can be modified by a "general will" to reach the socially optimal and Pareto-superior outcome by means of "… an enforceable contract between them (*the prisoners*, nrd)" (ibid.: 556).[1] In the study of the production of public goods and the achievement

[1] "… what is needed is an enforceable contract between them." They would both be ready to appoint an agent who would see to it that neither of them confessed. In the absence of sanction (or, we might even say, of a Sovereign), each prisoner may be driven by rational self-seeking to break the contract which is to the common advantage of both. This gives an immediate and plausible sense to Rousseau's notion of the members of a society being " forced to be free ", … " each, separating his interest from the interest of all, sees that such separation cannot be complete, yet the part he plays in the general damage seems to him as nothing compared with the exclusive good which he seeks to appropriate … . It

of cooperative outcomes in the working of organizations assume the presence of strict institutional constraints (incentives and sanctions) supporting cooperative outcomes (Ostrom, 1990; 2000). The necessity to resort to institutional constraints can be justified on the basis of the weakness and riskiness of spontaneous cooperation as the unravelling and break down of cooperation in finitely repeated prisoner's dilemma experiments clearly demonstrate. On such an account, institutions would serve as instruments aimed to enforced, not to create, existing processes of formation of cooperatives behaviours and outcomes, which are endogenously emergent in social interaction. Hence, institutions are indeed social devices reinforcing and stabilizing existing social patterns, as already spelled out in classical contributions to institutional economics (Veblen, 1989; Commons, 1931).

We place the emergence of organizational forms based on the cooperation as coordination mechanism in this line of enquire, as new organizational forms, for example cooperative enterprises and social enterprises, emerge first in a spontaneous and possibly informal way (or partially informal way), to enforce emerging cooperative patterns in the economy (Borzaga and Defourny, 2001). They are then progressively institutionalized and formalized. Also new institutional constraints and contrivances specific to these forms emerge and become institutionalized over time, for example membership based governance and the asset lock (Birchall, 2010; Tortia, 2017).

The cooperative contents of such forms, however, cannot be explained by formal institutions and constraints alone, but reside in the very nature of the relations that where initially set up. Important examples concerning cooperative and social enterprises abound: initial cooperatives forms were created in the United Kingdom in the XIX century. The well-knows Rochdale Society of Equitable Pioneers represented the first successful cooperative experiments of modern times, and it is to be interpreted as reaction to the harsh and unfair social conditions undergone by the working class during the industrial revolution; the group of plywood cooperatives that developed in the US emerged in the US following a localized pattern in a specific industry, without intervention from State of National authorities (Gunn, 1992); Italian legislation on cooperatives, which has been supporting the development of one of the largest cooperative movements in the world, was introduced in 1947, after WWII, in the presence of an already existing and developed set of cooperatives throughout the national territory. The 1947 law (so called "Basevi Law" after its rapporteur's name) introduced the compulsory partial non-profit distribution constraint and partial asset lock in all Italian cooperative

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is, finally, the legislator who must persuade the people of their true interest: the average man " finds it difficult to see what benefit he is likely to derive from the ceaseless privations which good laws will impose upon him " (Runciman and Sen, 1965: 556).

firms.[2] Legislation on social cooperatives in Italy in 1991 followed several initial experiments in setting up socially oriented mutual benefit organizations carried out by social activists and volunteer workers in the 1970s and 1980s. Several other examples could be put forward.

3.2.5. Formal institutions as solution to the failures of cooperation

Elinor Ostrom (1990) started in the 1980s a new research stream dealing with the management of common pool natural resources and with the creation and development of dedicated governance structures directed to manage the communality of resources. She also studied the management of local public goods (Ostrom and Ostrom, 1978). In these works she demonstrated that, the overcoming of fundamental social dilemmas, such as the tragedy of the commons, the prisoner's dilemma, and well-known failures in collective action, can be attained by relying on cooperative agreement, which are translated into the creation of suitable governance rules. These rules prevent the destruction of common resources and allow their beneficial exploitation. They need to define the ambit of application, identify the subjects or groups that are allowed to exploit the resources; involve participants in decision making processes, control the correct accomplishment of exploitation processes and sanction defectors. Complex and evolving governance is context dependent and the upshot of collectively managed objectives. This approach can be extended to the study of the governance of enterprises and other contexts of social interaction that do not concern natural resources (e.g. public goods, urban and rural regeneration etc…; cfr. Tortia, 2018; Charmettant and Renou, 2020).

Decentralized governance for the management and exploitation of common resources cannot be explained without, explicitly or implicitly, accepting the idea that economic agents need to and can cooperate in a spontaneous way to pursue common objectives that bring benefits only when they are pursued collectively, and that each single individual would not be able to pursue separately.

As Ostrom herself states, cooperation lies at the basis of all processes of collective action in the management and exploitation of common resources. Starting from her seminal work, a very large literature in economics and political science, especially in environmental economics and public economics, developed to study the optimal utilization and regeneration of natural resources. From our viewpoint, Ostrom contribution is crucial in its focus on cooperation as coordination mechanism.

[2] All Italian co-operative typologies (consumer, producer, worker, social etc…) are required by law to reinvest at least 30 per cent of their positive residuals into indivisible reserves (asset lock). Cooperative banks (Cooperative Credit Banks, *Banche di Credito Cooperativo*) are required to reinvest 70 per cent of their net residuals in the asset lock. Abundant empirical evidence shows that most Italian cooperatives reinvest close to 100 per cent of their net residuals into indivisible reserves.

She developed a research field in which economic objectives cannot be pursued and reached in the absence of horizontal relations and control, and without active involvement of the participating actors. Involvement is required because the objective of such structures is not private appropriation, hence economic incentives would not be sufficient to induce individuals to pursue efficient social outcomes, or would lead to distorted outcomes. The absence of strong economic, especially monetary, incentives, implies the requirement to put the actors in charge of defining and pursuing the objectives themselves, by supplying and gathering the necessary resources, by creating appropriate rules, and by controlling the outcomes.

As Ostrom herself writes: "Dilemmas nested inside dilemmas appear to be able to defeat a set of principals attempting to solve collective-action problems through the design of new institutions to alter the structure of the incentives they face. ... But some individuals and/or communities have created institutions committed themselves to follow rules, and monitor their own conformance … to the rules in common pool of resources situations". Elinor Ostrom (1990:45). Governance is clearly the crucial dimension that needs to be developed, if common resources are to be managed in an effective way.[3] All tiers need to be strongly connected to each other.

The set of rules proposed by Ostrom strongly depends on local actors, information, and participation in rule making. The whole process of governance building is intrinsically bottom-up, since only local actors are ultimately in charge of defining and approving the relevant rules (Ostrom, 1999). Cooperation emerges as a spontaneous, complex, bottom-up, and time consuming process. Most of the Ostrom arguments and principles can be applied not only to the governance of natural resources, but also to organizations and at least to a sub-set of entrepreneurial organizations, especially in cases in which common assets (e.g. locked assets and trust funds) are present and there is rivalry in the consumption or utilization of such resources. Quite clearly, these common assets in organizations are given ex-ante, but are instead the result of institutional evolution (legislation and other forms of organizational regulation (that support the creation and of common assets (e.g.

[3] Ostrom (….) spelled out eight fundamental principles that need to be fulfilling in regulating the commons: the boundaries of the involved group of people (community members) using the common resource need to be clearly defined; the rules governing the use of common goods need to be matched to local needs and conditions; the people affected by the rules are to be involved in decision making and have the possibility to modify the rules if and when needed; the possibility to modify the rules for managing the commons need to be respected by outside authorities; monitoring mechanisms are to be put in place to patrol the compliance of community members to the selected rules; violators of the rules would undergo graduated sanctions (proportional to the severity of the offence); dispute resolution mechanisms (rules or specific agencies in charge of such duty) need to be put in place; in larger commons, build a multi-layered governance system, in which lower tiers (grass-root organizations) are nested into the higher tiers. All tiers need to be strongly connected to each other.

collective or indivisible reserves of capital) through the imposition of the non-profit distribution constraint, the reinvestment of positive residuals and accumulation of other assets (e.g. financial and in kind donations etc…; cfr. Tortia, 2007, 2018; Borzaga and Toertia, 2017; Charmettant and Renou, 2020). We develop further arguments concerning the process of institutionalization of rules governing the accumulation and use of common resources in entrepreneurial organizations in the following sections.

3.2.6. *Behavioural economics*

Behavioral economics emerged at the intersection between psychological and economic science (Kanheman and Tversky, Thaler,). Concepts central to behavioural economics, such as trust, reciprocity and fairness, were already study by some new institutionalists (Ostrom 1998, 2000), evidencing this way the strict relationship between institutionalism and this new growing approach, including also psychological game theory (Sacconi, …; Sacconi and Degli Antoni, …). Fairness was incorporated in economic theory in terms of fairness equilibria originating from positive and negative reciprocity (Rabin, 1993). The import of trust and reciprocating behaviours in economic analysis emerged in their full importance in the behavioural literature on social preferences and in the related experimental application (Fher and Schmidt, 1999; Fehr and Gächter, 2000). In these contributions, fair behaviours lead to new game theoretic equilibria, defined as fairness equilibria, which do not need to be in contrast, but enlarge the concept of Nash equilibrium in strategic interaction.

Behavioral economics, to a great extent, studies the conditions under which cooperation is possible in one shot, repeated and sequential games, and in several different settings. While reciprocity supporting cooperative behaviours became crucial in the study of the production of public goods in a repeated prisoner‘s dilemma setting, trust and reciprocity emerged as the dominant behavioural dimensions in the trust game (Berg, Dichhaut and McCabe, 1995), while fairness and reciprocity dominated the analysis of the ultimatum game (Guth, Schmitberger and Schwarze, 1982; Fehr and Gächter, 2000).

Cooperation as coordination mechanism is more likely than market and hierarchy to be found in the presence of intrinsic *vis-à-vis* extrinsic motivations (Deci, …; Deci and Ryan, …). Intrinsic motivations are not absent in market exchanges and hierarchical relations. However, these traditional coordination mechanisms tend to downplay the role of intrinsic motivations, because extrinsic incentives tend to prevail. Gain from trade is the mechanism underlying market exchanges, and monetary gain clearly represent an extrinsic incentive. On the other hand, command and subordination is the mechanism underlying authority. This mechanism is expected to work, at least in a prevalent way, in the absence of intrinsic motivations. In these cases, trust and reciprocity stay in the background of the working of the organizations. They are not absent, but their presence is often not put under the spotlight and incentivized (Borzaga and Tortia, 2017).

The results reached by behavioural economics represent fundamental stepping stones in the study of cooperation as coordination mechanism. Both the sustainability of cooperation based on reciprocity in the presence of appropriate institutional constraints, and the fairness of the outcomes reached show that cooperation has a fundamental role to play in organizations too.

4. Advantages and disadvantages of cooperation as coordination mechanism

When understood as coordination mechanism and compared with gain form trade and authority, cooperation shows both advantages and limits. In this section we work out the advantages and disadvantages of cooperation as coordination mechanisms. We discuss the cooperative mechanism and take cooperative and social enterprises as the social and organizational context in which the cooperative mechanism can be found and studied.

4.2. Advantages

Among the main advantages of cooperation are its ability to overcome contractual failures due asymmetric information, ex-ante, and ex-post market power. Cooperation also improves the efficiency of governance structures, by lowering transaction costs. This is true in all governance structures, in organizations and in other social contexts (e.g. the governance of common pool resources). Among organizational forms, it is true in all typologies, that is private, public, non-profit and cooperatives. However, the degree of utilization and importance of cooperation is clearly different in different organizational forms, as it is expected to be substantially higher in cooperative, non-profit and social enterprise forms, than in privately and publicly owned organizations.

4.2.6. How cooperation can overcome market failures: market power, limited information and incomplete contracts, hold up

Market power. When consumers can act as a group and cooperate to satisfy their needs, instead of transacting individually with the providers– as in users, consumer and credit cooperatives co-operatives or associations. In such cases, they can overcome market power and obtain lower prices or better quality. User organizations as credit and consumer coops or other consumers groups minimize, not maximize profits, because they need to serve the objectives of users and clients, not producers. In some complex transactions intermediate and hybrid forms can be imagined in which control is shared between consumers and producers in order to balance costs and advantages of consumer and producers control.

In more general terms the cooperative mechanism can work to reduce prices and increase production in many common circumstances. When the cooperative mechanism and social objectives dominate, the profit is not any more a relevant objective and new kinds of welfare outcomes can be observed. In the sphere of consumption, coordination can take place through flexible price setting mechanisms, such as price discrimination. The inclusion of clients and users among the active stakeholders of the organization, and the circulation of better information concerning their identity and economic features. Consumers may be willing to reveal their true willingness to pay for goods and services (reserve prices) and production can be increased by lowering prices for less wealthy (unable to pay) consumers (Grillo ??? Tortia, 2010).). Lower prices imply higher social surplus, production, and employment. The same mechanism can also lead wealthier users, or users characterized by higher reserve prices to pay higher prices, or subsidize the organization through voluntary donations (Weisbrod, 1977, 1988; Grillo, 1989).

In the sphere of production, coordination between the organization and producers, especially managers and workers, can lead such categories to accept lower wages or other remuneration, in exchange for improved working conditions (especially better wellbeing and fair labour relations), involvement in decision making processes (which may support intrinsic motivations to work), and the pursuit of not fully self-interested aims, such as social and environmental aims.

These outcomes, which are clearly in contrast with general equilibrium laws, is explained by the cooperative mechanism which, through the imposition of the NPC, and/or through the development of multi-stakeholder governance, or user control, is able to align payments either with the ability or willingness to pay of customers. The former case is realized when prices are reduced in favour of poorer clients, the latter when higher contribution is voluntarily accepted by wealthier clients.

The different forms of cooperative governance, including multi-stakeholder forms, can put a limitation on power asymmetries inside the organizational and positional advantages deriving from market power. Excluded stakeholder can be given means, adequate information and decision making power, to overcome existing unbalances in those situations in which market power cannot be overcome by simply increasing competition, or substituting private with public ownership. The theory of multi-stakeholder governance became popular concerning organizations that populate the social economy – non-profit organizations, social cooperatives and social enterprises - because in this field the benefits of coordination among different stakeholders more often overcome the costs (Sacchetti and Borzaga, 2015). Multi-stakeholder governance has more limited role in conventional business corporations and in traditional cooperative laws, but research on corporate social responsibility strove to highlight its advantages also in more traditional fields of enquiry and operation, for example as related to industrial relations and co-determination of workers and investors in some Northern

European countries (Sacconi, 2012). Studies on multi-stakeholder governance, show that governance rules coordinating different objectives and interests are crucial, both incentives and sanctions. However, before the necessity to implement suitable governance, reputation of and trust among the involved stakeholders can represent necessary conditions for keeping transaction costs (both contractual and organizational costs) under control.

Limited information and contract incompleteness. Cooperation is able to overcome asymmetric information and the limits imposed by contractual incompleteness: it is possible for economic agents cooperating and trusting each other to adapt behaviours and contracts ex-post: after new states of the world appeared, without the need to include new unpredictable events into complete contracts. Several contributions already observe that trust has the potential to lower transaction costs and increase economic efficiency (literature on social capital started by Putnam). This implies that trust allows to overcomes complete contracts (which in most cases are impossible to write).

Furthermore, the cooperation mechanism is especially useful and effective in presence of unpredictability of future states of the world. In the presence of strong uncertainty, horizontal relations based on trust allow agreement on production plans even in the absence of reliable knowledge concerning the outcomes of production processes, and economic gains thereof. On the other hand, trust and cooperation can allow better flexibility, by allowing adaptability of production plans and individual duties to different states of the world. Trust, in this case, would allow lowering transaction costs, since operations and contracts do not need to be reformulated and enforced following new bargaining procedures, but can readapted to changed conditions on a continuous way, and without costly procedures and disputes.

When trust and reciprocity are the dominant behavioural propensities, the relevance of asymmetric information becomes lower than in the case of contractual failures, and the reason is that the dominant behavioural propensity in market exchanges is self-interest, not trust and reciprocity.

Hold-up. Again, when trust and reciprocity are embedded in a relevant way in organizational processes, agents would expect that ex-post contractual imperfections are not exploited in self-interested terms. Trust and reciprocity correspond to a specific form of cooperative rationality (Sugden, 2004), and have been incorporated in specific managerial theories, such as the stewardship theory (….). In the absence of such expectation, economic agents may prefer to quit the contractual relation, or impose exchange like mechanisms, such as control, monitoring, monetary incentives and sanction. Stewardship theory deals with the responsibility of managers towards their subordinates. The theory focuses on pro-organizational behaviour as opposed to self-serving behaviour Trust enters the picture as crucial relational dimension in the interaction between managers and subordinates

(Davis, Schoorman and Donaldson, 1997). Kluvers and Tippet (2011) apply stewardship theory to non-profit organizations and show that, to maintain and improve motivation, management needs to look to the goals, or mission, of the organisation, especially service to clients.

Psychological game theory (Sacconi, 2012) shows that it is possible to overcome ex-post contractual power when economic agents conform to a norm of fairness that can be formalized by using augmented utility functions in which a psychological component representing conformity to a fairness norm is added to the self-interested component. Trust and reciprocity are here interpreted as preconditions for the achievement of fair outcomes. When such analytical scheme is developed, economic agents can expect to reach psychological (Nash) equilibria characterized by fair outcomes, even in the presence of asymmetric distribution of information and contractual power, which implies exploitative economic relations and outcomes, or to the impossibility to reach coordination (market exchange) at all when self-interest is dominant . This shows that cooperation represents a new coordination mechanism allowing the implementation of governance structures that can solve problems, traditionally understood as insolvable.

5. Limitations and disadvantages

Cooperation as coordination mechanism undergoes not only advantages but also limitations. The main limitations of cooperation as coordination mechanism are: (i) the difficulty to access adequate scale economies; (ii) the necessity to build the working of the organization upon a generalized degree of trust among the involved actors; (iii) the necessary degree of trust is often not achieved. In such conditions, cooperation as coordination mechanism may not be able to manifest its beneficial effects, and opportunism can easily spread (Alchian and Demsets 1972). In the following, we discuss these limitations but we also declare that they can be limited or overcome by resorting in a partial and subordinate way to more traditional coordination mechanisms. For example, financial difficulties can be eased by allowing partial distribution of surplus (dividends) and by including to financial members in decision making processes dealing with financial strategies. The inflation of governance costs due to lengthy and contrasted decision making processes can be alleviated by introducing limited degrees of hierarchical control whereby directors, who are elected by members, appoint managers who can use fiat to implement organizational procedures and seek organizational goals (Chomsky, 2021).

5.2. Dimension

Small dimension can be an important limitation when cooperation as coordination mechanism is implemented in isolation. The working of horizontal, interpersonal relations, and involvement of participating actors can be put under strain when dimension grow. Governance may or may not be able to substitute personal relations in guaranteeing adequate involvement and generalized trust. The growing filed of studies on governance, and especially on governance in organizations based on involvement and trust needs to face important challenges in showing under what conditions cooperation is still existent and able to guarantee coordination in large organizations (Ostrom, 1990; Hansmann, 2013; Birchall, 2017).

Since cooperation is based on trust and reciprocity as behavioural substratum, outcomes of cooperation are subject to an intrinsically higher degree of uncertainty, meaning that, as a norm, cooperation can spread when trust can be developed and sustained over time. This is possible, in external agency relation, when organizations, for example through the imposition of the non-profit distribution constraint (Hansmann, 1996) are able to show to their clients and costumers that they are going to protects and enhance trust relation by not exploiting information advantages and contractual power (Hansmann theory of non-profit organizations, 1996). Alternatively, cooperation can be sustained overtime by develop when stable interpersonal relations are developed overtime in internal agency relation. In turn, the development of cooperative interpersonal relations based on trust is considered to be easier and more effective in inclusive and cooperative governance structures, based on participatory practices, than in exclusive governance, based on hierarchy, extrinsic incentives, and sanction. These organizational processes, as a matter of course, are more often possible and observed in small than in large organizations, which would have, in this specific sense, a strategic advantage in creating and preserving cooperation.

These arguments are part of the explanation of why, in several common circumstances, small and constrained organizations (stronger financial constraints, and lower economies of scale) are able to survive and strive vis à vis large companies, also in competitive economic sectors.

5.3. Generalized trust

Trust is a scarce resources in all social systems. Its fundamental importance has been especially highlighted by the literature on social capital which showed a strong and positive correlation between the presence of trust and socio-economic development (Putnam, …). Trust is especially difficult to study in organizations, since in such case social relations are transformed into tight interpersonal relations, resources are scarce and their utilization rival, and objective are cast in purely productive terms (Tortia, 2017). In such circumstances, co-operation as coordination mechanism can suffer from limited or absent generalized trust, leading to increased transaction costs in terms of costs of governance and litigation. This argument would also explain the uneven distribution of cooperative relations among individuals, between institutions, inside and between different regions of the same countries.[4]The challenge in this case is to understand how co-operation coordination can preserve or even increase the presence of generalized trust, especially in large and complex organizations (Sabatini, Modena, Tortia, 2014).

5.4. *Opportunism*

Opportunistic behaviours can undermine cooperation. Opportunism can be present in all organizational forms, and in all coordination mechanisms, but it is more dangerous in the case of cooperation, given its horizontal nature, based on reciprocal trust. Opportunism has long been evidenced as one of the main limitations of cooperation (Alchian and Demsetz, 1972; Holstrom, 1982). Opportunism, especially free riding in work effort, represents an especially difficult problem to be solved in cooperative interaction. The low possibility to rely on authority and the absence of external supervision puts the burden of control on the actors participating in cooperative interaction themselves. This may be an objective difficult to reach. Well-known theories concerning the "tragedy of the commons" (Hardin, 1968), the "prisoner's dilemma" (Nash, …) and the "logic of collective action" (Olson, 1965) together with already cited works in the theory of the firm would have predicted failure in circumscribing the spread of opportunism and free-riding in collective action. Other theories (Ostrom, 1990) attempted to de-construct the problem of opportunism, and re-constructed it, by advising on those institutional mechanisms – decision-making, incentives, monitoring, sanctions – and behavioural elements – trust and motivations - that would have guaranteed effective limitation of the problem of opportunism. Again, the challenge rests with showing that solutions are stronger than the problem itself, especially in large and heterogeneous organizations which base their working on co-operation as coordination mechanism.

5.5. *Non-profit constraint and non-saleability of assets*

Limited importance of private objectives implies can limit access to financial markets, and the need to self-finance and accumulate the resources (physical and financial) needed to carry out organizational objectives. The impossibility or limitation to gather financial capital (equity) on the market characterizes most organizational typologies in the social economy and led to the introduction of self-financed and accumulation of collective capital resources as alternative source of financial support for investment programs and collateral guarantees. Non-profit organizations, utilise non market resources such as volunteer labour, in kind and financial donations, and socialization of the firm assets (asset lock) to achieve financial independence (Tortia, 2018). Collective reserve are not appropriable by members and serve the pursuit of collective and social objectives. Similar but weaker

[4] Differences between Northern and Southern Italy represent one of the clearest examples in the world).

constraints are imposed on cooperative and social enterprises in several countries. These organizational forms can, indeed distribute part of their surplus to members and financiers, while the core of the patrimony of the organization is owned collectively and non-sharable.

6. Cooperation in organizations: institutionalization of the commons in the organization field

Even if it has been studied in a less systematic way, cooperation as coordination mechanisms appeared more recently also in the study of organizations in general, and also of business organizations (Grandori, ….; Borzaga and Tortia, 2017). Even if business enterprises seek private appropriation as their dominant objective, the importance of cooperatives relations, between owners, managers, and clients; between owners and employees; and finally in labour relations has been evidenced by several contributions in economics and management (e.g. Akerlof, in the form of gift exchange). The reduction of the costs of conflict, and of transaction costs more generally, and the pursuit of common objectives, which can benefit all the main stakeholder classes, has been called to require enlarged governance and corporate social responsibility has necessary ingredients (Sacconi, 2012). Cooperation can also be understood as coordination mechanism that allows to solve agency problems (reduce agency costs), as suggested by the theory of stewardship and servant leadership (Jensen and Meckling, 1976; Greenleaf, 1977; Davis, Schoorman and Donaldson, 1997; Donaldson and Davis, 1991; Marsiglia, 2009).

When private objectives are not dominant, such as in less conventional organizations found in the social economy – non-profit organizations, cooperative and social enterprises – cooperation becomes the fundamental ingredient of organizational governance for reasons already evidenced in the case of the governance of the common. When mutual benefit, and social benefit objectives are added to purely private ones, highly powered monetary incentives become less effective, and collective action more important.

In our framework of analysis, the foregoing arguments imply than in mutual benefit and socially oriented organizations, cooperation and collective action become the fundamental mechanisms through which the organization pursues financial independence by accumulating owned and indivisible financial resources (Tortia, 2017).

It is necessary to introduce co-operation as coordination mechanism of the economic activity because co-operation is neither market not-hierarchy. Its introduction is required to achieve a better understanding of the working of organizations, and of the economy, including markets, as whole. Cooperation cannot be interpreted in terms of pure market exchange because it is not an exchange of product or services, meaning that it cannot be defined as exchange of equivalent economic values (Sacchetti, Borzaga and Tortia, 2021). It is not hierarchy because cooperation is, fundamentally, incompatible with higher ordered and lower order individuals or institutions. In Figure 1 we represent the role of co-operation as coordination mechanism in the organizational realm. The three dominant coordination mechanisms represent the three poles, which define the organizational space. Different organizational forms include some elements of the three mechanisms, but each form can be considered closer or further from the three poles in relative terms. Investor owned enterprises are closer to the gain from trade pole, even if their contemplate also elements of hierarchical direction (like in the Coasean tradition in the theory of the enterprise) and cooperation (as it is singled out in many research streams in human resource management). On the other hand, co-operative enterprises are close to the to co-operation as dominant coordination mechanism but can include limited element of direction for internal coordination, while they interact with market for external coordination.

Figure 1. The space of coordination mechanisms in organizations: market, hierarchy and co-operation. Hybrid organizational solutions

HIERACHY
Dominant mechanism: The State
Intervening mechanism: Investor owned companies
Coase-Williamson-Simon

MARKET (gain from trade)
Dominant: Investor owned companies
Intervening: Co-operative enterprises
Alchian, Demsetz, Jensen, Meckling

HYBRIDS

- Benefit corporations and b-corps
- Low profit companies
- Investor owned companies controlled by co-operatives and social enterprises

Defourny, Nyssens, Borzaga, Spear

CO-OPERATION
COLLECTIVE ACTION
Dominant:

- Co-operatives
- Social enterprises
- Management of common-pool natural resources

Intervening: State, Investor owned companies
Ostrom, Birchall, Borzaga, Valentinov

Note: cfr Borzaga and Tortia (2017) and Tortia and Valentinov (2018)

Similarly, public institutions are regulated on the basis of hierarchical direction and administrative procedures, but they can interact with markets and use the co-operation mechanism when co-operation and market exchanges further the achievement of their objectives (for example because they can reduce transaction costs). A now vast literature is now devoted to the study of hybrid organizational forms, which can be defined as those forms that are not characterized by a dominant mechanism, but by a mix of different mechanisms, including social objectives, market transaction, non-market resources and hierarchical relations (Spear, Cornforth and Aiken, 2014). Social enterprises, B-Corp, benefit corporations and low profit companies can be listed in this category, as they can be characterized by strong elements of co-operation and collective action, but are also integrated with markets. Hybrids, may or may not be characterized by the presence or absence of the organizational features of the pure forms (for example, any form of constraint on the distribution of profits can be present, but does not need to be present in hybrids). Just because they result from the mixing of different mechanisms, hybrids are able to modify the rules of exchanges on the market, like in the case of fair-trade and micro-credit, which add a social component to pure market transactions.

7. Discussion and research perspectives: from market failure to coordination failure

The main result of this discussion is that the interpretation of co-operation as coordination mechanisms can lead to re-interpret the whole theory of market failures as a special case of a theory of coordination failure. Market failure is the consequence of the use of market coordination in presence of coordination failure (especially contractual failures) that could be better managed using cooperation or authority. Markets do not come first since, as the economic categories of market power, externalities and public goods can be studied within a theory of coordination of the economic activity and require non-market coordination, including collective action and cooperation (Tortia and Valentinov, 2018).

7.1. Market power and self-equilibrating role of co-ops

Both in situations of monopoly and monopsony, co-ops are able to make the system converge to the efficient (competitive) equilibrium, even in the absence of competition. Consumer co-ops are able to lower interest rates and increases the supply of credit (Avoid the risk of credit rationing) even when they hold significant market power. Credit coops expand credit even in the presence of asymmetric information and imperfect credit market. Worker coops do not reduce employment even when maximization of individual income would make it convenient to do so.

This kind of argument, which involves cooperation as coordination mechanism and collective action, can easily contribute to solve well-known inconsistencies between theory and empirical evidence. Both the Ward (1958) and the Alchian and Demsetz, 1972) criticize in a radical way the possibility of the existence and efficiency of worker cooperatives. The former by referring the alleged perverse reactions of worker co-ops to external market stimuli. These perverse reactions, however, have never been confirmed by empirical tests (Bonin, Jones and Putterman, 1993; Tortia, 2003; Perotin, 2013). The latter by referring to the problem of free-riding in team-work, which would prevent groups of worker principals from carrying out production efficiently in the absence of an external monitor (the owner and residual claimant in investor owned companies). Both theoretical results, however, do not consider the possibility of collective action and cooperation and draw at least partially mistaken conclusions. Collective action can amend the mistaken implications of the Ward (1958) model, since in the presence of collective decision-making worker members can decide to value employment stability and condition average income maximization to the constraint of constant employment. That is the assumption of perfectly flexible employment in the short run Ward (1958) would be dropped. Workers in coops would maximize total income while keeping employment constant (Ellerman, 1984, 1986). On the other hand, theoretical end empirical analysis has shown that collective action in production does not need to fail, when proper governance rules are devised (Commons, 1950; Putterman, 1988; Ostrom, 1990). Instead, it is crucial to devise governance rules and structures, and study the individual and collective conditions (including working rules, incentive systems and sanctions) that are most likely to guarantee or improve efficiency (Ostrom, 1990).

The main economic inefficiencies derived from market power in the absence of a competitive setting is the results of the conjugation of investor ownership and, as its main consequence, profit maximization. The maximization of the objectives of investor would unavoidable lead to the higher prices and restriction of supply. When cooperation becomes the main coordination mechanism, involvement and multi-stakeholder governance can lead to re-balancing of interests and objectives in a way more favourable to satisfy the needs of weak stakeholders (e.g. customers and employees) even in the absence of sustained competition.

7.2. Public goods

8. ***Production of public goods as outcome of collective action in decentralized systems. Under what conditions collective action can produce public goods and overcome market failures even***

in the absence of the intervention of public authority (e.g. in the management of common pool natural resources)

The production of public goods requires collective action and is only achieved in inefficient ways by means of market coordination. Non-profit organizations and social enterprises have been shown to be able to achieve public benefit, although in a limited way and can contribute to the process of production of (impure) public goods that can improve the social and environmental sustainability of the social system (Thompson and Valentinov, 2017; Sacchetti and Borzaga, 2020). TO BE ADDED: Positive external effects; Better organizational conditions in the sphere of production

8.1. External effects

Collective action in the production of public goods and the possibility to produce positive external effects as related to the presence of social motivations and other-regarding preferences. This kind of approach and problem is becoming more and more dominant in the study of problems related to environmental sustainability, besides more traditional problems connected with social activities and welfare services that produce positive external effects (education, culture, health, care services etc…).

Inefficiencies derived by the presence of positive and negative external effects can be counteracted by co-operative coordination. Positive external effects can be captured when the organization gives a strong role to users and customers. User involvement more easily leads to better circulation and unveiling of relevant information and to contribution anchored to reserve willingness to pay more than on equilibrium prices thanks to the mechanisms of price discrimination and of donations, which are typical of cooperative oriented organizational forms. On the other hand, negative external effects can be limited by involving weak and damaged stakeholders into decision making processes. The obvious example of pollution and environmental degradation makes it clear that involvement of weak stakeholder groups (e.g. the community and employees), instead of state intervention, taxation and sanctions, and in the absence of an efficient market for external effects (Coase, 1960) can be most effective in balancing costs and benefits (both internal and external) produced by economic activities.

9. Conclusion

- These conclusions are coherent with an institutionalist and behavioral framework, but are not coherent with orthodox approaches to economics

- A new systematic approach can explain the working of cooperation in simple ways, as it has been shows, which however are not accessible for orthodox economics
- These conclusions are coherent with an institutionalist and behavioral framework, but are not coherent with orthodox approaches to economics

In this contribution, we interpreted co-operation as a coordination mechanism of the economic activity, focusing on both its advantages and limitations. We also compared its role and functioning to the more traditional and much more studied mechanisms of authority and market exchange. Our approach represents a new scientific endeavor, since it can help explain the limitations of existing economic theory and the results of much empirical research. Our approach is consistent with the emergence of new organizations based on cooperative behavior in the provision of public, or meritorious goods and services and with criticism against the prevalent socio-economic model of isomorphism based on two actors only: the market and the State. Our contribution, therefore, sets the stage for further and more analytical research in the economics of co-operation. Future theoretical, empirical, and experimental contributions will have the opportunity to analyze more closely the evolution of the institutional and governance structure of co-operatives, their ability to generate and distribute welfare among the involved constituencies, and to act as the determinants of the well-being and collective choices and actions of members.

When co-operation is understood as autonomous coordination mechanism of the economic activity, the whole understanding of the nature of co-operatives and of business enterprises more generally is renewed and widened, since the working of the organization is no longer exclusively seen in terms of trade and authority, but also in terms of collective ability to carry out co-operative projects by devoting effort and resources to them. As we observed, the implications are stringent: the dominance of the co-operative mechanism implies lower recourse to monetary incentives and relations based on trust more than on direction, thanks to a fundamental role for intrinsic motivations and procedural fairness, and to lower opportunism in intra-organizational relations. Market and hierarchy can still be useful, but not dominant, to pursue these objectives, for examples when dimensional growth and wide delegation of decision-making is needed, or when co-operatives expand by acquiring conventional corporations.

Contrary to what theories of organizational isomorphism claim, differences in control rights, objectives, and different forms of governance impact differently the behaviour of co-operatives organization. Consistently with Williamson (2000), we can state that the impact of co-operative coordination runs all the way up from the most fundamental institutional layers to the surfacing layers. The deepest layers, which define strategic objectives and the patterns of appropriation, are found in control rights and governance; while the surfacing layers, which define the interaction between the organization and the external environment, correspond to working rules and organizational routines inscribed in organizational protocols, in managerial models and practices, and in the deployment of technology.

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