

Positive collaboration: Factors and mechanisms of evolution[☆]

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Abstract

This article proposes that two types of collaboration can be distinguished: a positive collaboration (not directed against third parties) and negative collaboration. I consider the hypothesis that in the process of social development, the transaction costs ratio of the three main types of coordination—competition, power, and collaboration—is changing in favor of the latter. The article examines the mechanisms that are responsible for the implementation of this tendency and attempts to explain its nonmonotonicity. It is shown that the strengthening role of positive collaboration is largely explained by cultural changes, including the enhancement of tolerance culture, spread of cosmopolitanism and altruism, and increase in the planning horizon as well as trust radius. I demonstrate the importance of the institutions that support positive collaboration in the process of catching-up development; it is shown that shock reforms could lead to the formation of negative collaboration mechanisms. A program of interdisciplinary research is outlined for the further development of these ideas.

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1. Introduction

A recent paper (Polterovich, 2015) contains arguments which demonstrated that, in the process of evolution, the scope of the coercion mechanisms embed-

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ded in the institutions of competition and power is reduced due to the expansion of the scope and significance of the institutions of collaboration. This means that the assumptions about the selfishness of man and competition as the main driving force of progress, which underlie the economic mainstream and many political constructs, lead to distorted perceptions about the most important trends in socioeconomic development. At the same time, the initial anarchistic idea about the supremacy of cooperative institutions over competition and power mechanisms, which used to seem purely normative and, moreover, utopian, is gaining empirical grounds. By encouraging the development of such institutions, we are only accelerating the “natural course of things,” rather than breaking it.

This view on the evolution of society and the task of its improvement form the basis of the philosophy of collaboration (collaborativism), which is suggested in the cited paper. In the present article, we specify and elaborate on its concepts in several directions. First of all, we introduce the terms of positive (not aimed against third parties) and negative collaboration. The argument about expanding collaboration is of course related to its positive version. In the work that is cited, this fact was only slightly noted; however, it deserves more detailed consideration. In comparing transaction costs for the three main mechanisms of coordination, i.e., competition, power, and collaboration, we discuss in detail the moral and psychological costs of competition and consider the prerequisites for reducing relative costs of collaboration.

The norms of civic culture were initially shaped within the elites and embedded in the mass consciousness through religious dogmas and coercion on the part of the state. For example, the “thou shalt not steal” commandment was supported by a cruel punishment—by amputation of the thief’s hand. However, during the course of evolution, the role of coercion was simultaneously reduced through two processes: changing laws and the internalization of norms. The former process was reviewed in detail by Polterovich (2015), based on examples of evolution in bankruptcy and antitrust law. The second process is described in Section 6 of this article.¹

It should be specially mentioned that the trend towards expanding the scope of positive collaboration was only fully manifested in the 20th century in developed countries. However, this process was not monotonic. The question about the nature of nonmonotonicity appears to be important. Below, we attempt to advance its understanding, relying on differences between the concepts of cooperative efficacy (see Cowen and Sutter, 1999) and collaborativeness: the former characterizes an individual’s ability to coordinate efforts with other agents; the latter means not only skills but the pursuit of collaboration. In addition, we study the role of the institutions of positive collaboration in the processes of catching-up development, and we identify one of the causes for nonmonotonicity: the shock nature of the institutional transformations that are inherent in revolutions and “radical” reforms. Examples demonstrate that, in this case, the mechanisms of negative collaboration² occur naturally, and they must either be destroyed or re-built in the process of further development.

¹ The mutual influence of institutions and culture is discussed by Polterovich (2016a), with references to the related literature.

² This part of the analysis is a continuation of the aforementioned paper.

The philosophy of collaboration does not contradict the observation that competition has played and continues to play an important role in the process of social evolution. It is well-known that war, which is the harshest form of competition, became one of the most important stimuli for the development of socioeconomic mechanisms and technologies in pre-capitalist societies; even in modern times, the decisive incentive for the invention and diffusion of information technologies is known to have been shaped as part of military research projects. As far back as the time of Kant, war was considered to be “the natural state” of relations among countries (Kant, 1994).³ Up until the mid-1970s, when F. Hayek and M. Friedman received their Nobel Prizes, competition may have seemed to be a natural (“spontaneous”) order of economic and political life. Today, there is every reason to believe that, in developed countries, the role of competitive mechanisms is decreasing, and in this sense, such mechanisms are as transient as the mechanisms of war.

The rest of the paper proceeds as follows. We begin by specifying the basic terms (Section 2) and then compare the costs that pertain to the institutions of competition, power, and collaboration, and the trends for their change (Sections 3 and 4). Section 5 is devoted to a more detailed consideration of the concepts of positive and negative collaboration; we attempt to explain the nonmonotonic nature of the evolution of these mechanisms. Then, we discuss the evolutionary trends in morality and civic culture that contribute to the emergence of positive collaboration (Section 6), and provide a list of the identified regularities (Section 7). Section 8 discusses the role of positive collaboration and the causes for negative collaboration in catching-up development processes. Then, we suggest the directions of further elaboration for this interdisciplinary topic (Section 9). The conclusion contains simple recommendations for the economic policies that pertain to this study.

2. The basic concepts: competition, power, collaboration

The concept of competition, in spite of its fundamental role in economic theory, has no universally accepted definition; different authors use it with different meanings (see, e.g., Metcalfe et al., 2002). This is also the case with the concepts of power and collaboration. To avoid misunderstanding, we should clarify in which sense these terms are used in this paper.

Interaction between several agents is called collaboration (competition) if a refusal to interact by any of them is not (is) to the advantage of all of the others. Additionally, we assume that collaboration is based on free will, i.e., none of the agents use coercion against any of the other agents to force them to collaborate. On the contrary, the mechanisms of power require that one agent or a group of agents holds a monopoly on coercion over the other agents, which limits their choices. Note that in the context of this paper, in most cases, references to power are about the power of the state.

The formulations given above are not precise definitions. Within a formal model, we would need to describe the actual meaning of “refusal to interact,” how the strategies of the agents may change if one of them refuses, and whether

³ The philosophical sketch was first published in 1795.

the threat of expropriation means coercion. In the attempt to specify them, we immediately find the possibility of different versions. This article is based on arguments that, we hope, are independent on the options of further elaboration of the used terms, thereby leaving the more subtle work to future researchers.

At the same time, we will need to avoid the temptation to use casual descriptions for various mechanisms. For example, generally speaking, a sports tournament cannot be called either a mechanism of competition or a mechanism of collaboration because every player may be interested in the participation of certain partners and the exclusion of others. In this paper, power and submission relationships are not synonymous. Submission may be voluntary and therefore present in collaboration mechanisms, and their hierarchical structure is not precluded.

The term “collaboration” may be applied to members of both charitable organizations and mafia families. Therefore, we should distinguish between negative and positive collaboration. In what follows, negative collaboration means a type of collaboration in which the desirable result is achieved at the expense of outsiders. In the opposite case, we define collaboration as being positive.⁴

In analyzing particular situations, these definitions also need specification. This need often arises, for example, in court proceedings, in the evaluation of an agreement (arrangement) between several companies. In this case, we review only obvious situations.

All three types of interaction, i.e., competition, power and collaboration, are coordination mechanisms. We can assume that all of the mechanisms of coordination, in a sense, act as a combination of these three basic constructs. This issue appears to be an interesting topic for further research.⁵

Hereinafter, when analyzing the evolution of the three aforementioned mechanisms, we will pay special attention to the changes in the area of coercion. In addition, when we speak about enhancing or slackening competition, we mean the extent of the losses incurred by the losing party in a competitive interaction. If these losses are insignificant, such that all parties ultimately benefit, then competition actually becomes an element of collaboration, which provides an experiment for the selection of effective strategies.

3. Competition, power, and collaboration: sources of costs and benefits

We assume that, in the process of evolution, an advantage is given to the coordination mechanism that helps to achieve social goals at lower material, social, moral, and psychological costs.⁶ This is why the comparison of social goals is an

⁴ This is a fairly imprecise distinction. It is unclear, for example, how we should classify an alliance of several firms overstating their product prices and simultaneously cooperating to develop new technologies. It is also unclear whether the type of collaboration within a religious cult that forbids its members from participating in social life can be considered to be positive. Further, we only consider cases where no issues of this type arise. However, it should be noted that collaboration mechanisms must be classified in more detail.

⁵ The classification and evolution of coordination mechanisms were featured in a report that was presented by Dementiev and Ustyuzhanina (2015). I would like to thank the authors for their comments, which encouraged me to specify the meaning of the terms that are used in this paper.

⁶ Of course, the mechanism with the lowest costs is not always realized. Institutional traps are possible. However, the more a society has to lose in this case, the stronger its interest in dismantling the institutional trap, thereby reducing the duration of its existence (on mechanisms of exit from institutional traps, see Polterovich (2007, Section 3).

essential stage in our analysis. The main sources for the costs of economic competition are as follows.⁷

1. The success of some firms is achieved through the losses of their competitors. The projects of those who fail are not realized or are useless, i.e., they waste resources. The most evident form of inefficiency is bankruptcy.

2. Competition means interaction at the micro level; in the absence of regulation, its important global results are not taken into account by competitors and often become destructive. A well-known source of inefficient competition is the imperfect response to externalities.

3. Competition is local in time. Due to a short planning horizon, agent decisions are often inefficient in the long run.

4. Another effect of the local nature of competitive interaction is the appearance of “bubbles” in financial markets and, as a consequence, the emergence of financial crises.

5. A competitive system is unstable with respect to the establishment of market power. Large firms often possess competitive advantages, therefore a “free” competitive market inevitably transforms into a certain type of oligopoly, or even a monopoly. This thesis is confirmed by the presence of agencies for antitrust regulation in all of the developed countries.

6. Competition is often associated with inadequate transaction costs, i.e., excessive advertising, lawful and unlawful methods of obtaining information about competitors, and price wars.

7. Competition leads to excessive inequality, which results in social costs. Inequality is only partially determined by an agent’s abilities and the intensity of the effort that is applied. An important role is played by accidental success, the possibility of which is created by society, which becomes deprived under conditions of complete freedom. This, in particular, calls for progressive taxation, which in its essence is a non-market measure.

8. The moral and psychological costs of competition deserve special attention.

A minor digression would be appropriate here. Until now, the government decisions in Russia and other countries have been substantially influenced by the ideology of economic liberalism. An analysis of the views of the classics of this school (see Avtonomov, 2015, which is a survey of the views of F. Bastiat, L. von Mises, F. von Hayek, W. Eucken, and M. Friedman) demonstrates that this ideology is based on three theses:

- free competition is the most efficient mechanism;
- competition does not contradict the fundamental principles of ethics, as a perfect market means impersonal competition, which does not result in hostility towards competitors (Friedman);
- competition is a natural (“spontaneous,” according to Hayek) order. It is the only mechanism that can guarantee the economic freedom of the individual.

The first thesis is reflected in economic theory as the first welfare theorem, which states that the competitive equilibrium is Pareto optimal. However, this theorem, as well as the respective thesis of classics of liberalism, is based on models that describe not the process of competition, but rather its hypothetical re-

⁷ The list of sources for the costs of competition is borrowed from Polterovich (2015, pp. 50–51); however, here the topic of moral and psychological costs is elaborated in further detail.

sult where competition really does not exist. None of the aforementioned costs of a competitive market are reflected in these models, whereas “...externalities and other market failures are not the exception but the rule” (Stiglitz, 2010, p. 283). For this reason, and due to the costliness of the processes for achieving equilibrium that are related to bankruptcies and which from time to time result in crises, these costs cannot be disregarded (Branch, 2002). It is not accidental that some economists refer to the concept of perfect competition as utopian capitalism (Rosanvallon, 2007;⁸ Bowles, 2011).

The second thesis is also inconsistent with the observations. Because real competition leads to market power, competitors know each other, which is a condition that runs contrary to Friedman’s hypothesis. There is no reason to assume that, in their attempts to vanquish an opponent, individuals or groups will follow the Golden Rule of morality⁹ or the Tenth Commandment. This is especially visible during crises. Describing the latter, Stiglitz wrote: “Like the many other banking crises that preceded this, each episode is marked by moral scruples that should make us blush...” (Stiglitz, 2010, p. 279).

“Free” competition is associated with coercion—economic as well as physical: in the past, the currently developed countries punished bankruptcy and price arrangements with incarceration. In contradiction to the third thesis, economic competition, not unlike war, provides freedom only for the strong. F. Knight, the founder of the Chicago school, a recent stronghold of economic liberalism, made this observation. Explaining his statement that “the competitive system... falls far short from our highest ideals,” he wrote that the market is not a noble game because it does not provide handicaps for the weak (Knight, 2014, pp. 57–66). No matter how “seasoned” a businessman may be, operating under such circumstances, he experiences psychological discomfort.

The statement that only competition can make an individual free is largely based on its comparison with a centralized governance as the only alternative. However, coordination through collaboration is also possible if there is freedom to choose partners and the rules of interaction. In this case, competition is not forbidden; however, as is shown below, it loses more and more to collaboration in terms of costs.

Both types of coordination, i.e., collaboration and power, provide the opportunity to gather more complete information, make related decisions, and join efforts to implement them. This enables externalities to be taken into account and used, as well as economizing on the scale effects, e.g., in finding demand data, organizing procurements and sales, creating innovations, and protecting one’s interests. In addition, this provides for more reliable risk insurance, particularly as a result of access to cheaper credit and through mechanisms of the benefits redistribution, reducing the probability of bankruptcy for every agent.

At the same time coordination, in the framework of collaboration and power institutions, not only requires costs for itself, but it is also associated with different types of opportunistic behavior: distortion of information, corruption, and free riding. These costs are reduced under competition. Moreover, coordination

⁸ The author is grateful to O. Ananyin for this reference.

⁹ “Never impose on others what you would not choose for yourself.” For other formulations, see Guseinov (1972).

through power suffers from an inconsistency between the interests and goals of managers and the managed, which results in high costs for coercion.

Collaboration means the minimization of coercion-based power, rather than its absence. Collaboration involves freedom in choosing partners and forms of coordination, while the inconsistencies between interests and goals are overcome in the search for compromises. However, the mechanisms for achieving compromises require costs and may prove to be inefficient under low civic culture and human capital.

Finally (and this should be stressed), collaboration may be aimed at deriving benefits at the expense of third parties (e.g., monopoly gains), thereby impairing social well-being. Below, we discuss the problems that arise in this regard.

4. The prerequisites for reducing the relative costs of collaboration

Certain trends that have been discovered in the process of socioeconomic development encourage a reduction of the relative costs of collaboration. We provide a list of these, with brief commentary.

The sophistication of technology leads to stronger positive effects from coordination, while the improvement of communication and information technology systems leads to reduced coordination costs in the framework of collaboration and power institutions. At the same time, technical modernization entails higher costs for violent confrontation, thereby encouraging the expansion of collaboration in international relations. Due to the development of computer technology, new forms of collaboration arise, such as online social networks.

The growth of well-being encourages the development of the sociopsychological structure of a personality, strengthening the standards of honesty and integrity (Anechiarico and Jacobs, 1996), increasing the relevance of the future (extending the planning horizon; see Strulik, 2012), and proliferating altruism and cosmopolitanism. These changes reduce the costs of collaboration and mitigate free rider problems.

The growth of human capital makes it easier to teach collaboration (Axelrod, 2006) and develops the skills to find compromises.

The development of social relations leads to greater trust between members of society (OECD, 2011), which substantially reduces the costs of collaboration.

Institutional development is accompanied by the emergence of institutions to reach compromises, e.g., parliamentary committees and business associations as well as other institutions of civil society.

5. Positive and negative collaboration

Recall that, according to our definition, negative collaboration means a type of collaboration in which the desirable result is achieved at the expense of outsiders. An obvious example is a mafia clan, a terrorist organization, or a cartel that intends to acquire market power to increase prices. A question arises in this regard: should a society always strive to improve its ability to cooperate? Cowen and Sutter (1999, p. 162) answer this question in the negative, by writing: “The same cooperative techniques which allow individuals to produce public goods also allow some individuals to combine and pursue their self-interest

at the expense of others.” The authors introduce the concept of cooperative efficacy, which means the ability for people to join and coordinate their actions to achieve common goals. In their opinion, improving cooperative efficacy may harm society, e.g., by increasing the degree of cartelization of the economy or by increasing discrimination against minorities as a result of joined efforts by the majority of the population. Improving the cooperative efficacy of members of the society makes it easier for the government to achieve social goals; however, as the examples of the Nazi and communist regimes demonstrate, it improves the opportunities for the ruling elite to benefit at the expense of society. Additionally, cooperative efficacy may improve the chance of success for an armed opposition, thereby leading to political instability. The article asserts that “cooperative societies,” while defending the supremacy of the collective over the individual, often demonstrate lower entrepreneurial activity, a low inclination towards innovation, worse diversity, and greater conformism (Cowen and Sutter, 1999, p. 164). As a rule, the mechanisms of cooperation produce both public goods and public bads, more or less achieving their goals at the expense of outsiders. This is why the problem is not to improve cooperative efficacy but to find its optimal level, where the marginal benefits of cooperation are equal to its marginal costs.

The above work led to a discussion (see Caplan and Stringham, 2003; Cowen and Sutter, 2005) that we have not reviewed in the article. In the context of the concept proposed here, the above arguments give rise to the important question of whether strengthening the role of collaboration encourages social welfare.

The answer that is given in the aforementioned article by Cowen and Sutter does not appear to be convincing for three reasons. First of all, the examples cited in the article only show that cooperative efficacy may lead to both positive and negative consequences for a society, but they do not demonstrate the existence of an optimal level of cooperative efficacy.

Second, cooperative efficacy is not an exhaustive parameter of collaboration; it only reflects the ability to coordinate one’s actions with the actions of other individuals to achieve a particular goal. This ability is similar to that which is observed in an ant hill, bee swarm, or a pack of monkeys. Man has this ability simply because he is a social animal. As civilization developed, cooperativity grew as it was an essential condition of survival, a prerequisite for defensive capability, and efficient in the production of material goods. However, the ability to cooperate is as important as the pursuit of collaboration with a sufficiently extensive multitude of individuals. We call this quality collaborative-ness, and (similar to the radius of trust) we speak about the radius of collaborativeness. The radius is determined not only by a society’s technical level but also by its mass culture. Collaborativeness involves cooperativity. Below we identify the trends that have prevailed to encourage the development of positive collaboration.

Third, one must distinguish between (relatively) short-term and long-term effects. At certain stages of social development, the technical capabilities to cooperate may improve faster than the radius of collaborativeness. This is encouraged by the uneven growth in cooperative efficacy. At first, every new shift affects a relatively small group of individuals (the elite), and then it gradually spreads to other social strata. The unevenness in the levels of cooperative efficacy creates

the conditions for the elite to derive benefits at the expense of other members of a society. This fact and, of course, the rigidity of social structures limit the radius of collaborativeness and shape negative collaboration mechanisms. However, the social need to improve human capital helps to even out the levels of cooperative efficacy and to create communities that oppose the elite;¹⁰ as a result, the role of competition and/or power grows. Nevertheless, the need to reduce high transaction costs that are typical for these mechanisms forces the opposing coalitions to find new ways to interact. The opposition is legalized; armed struggle for power is replaced with parliamentary struggle; competing firms create alliances to develop and jointly promote new products; states that used to be at war against each other sign treaties of collaboration. As a consequence, the radius of collaborativeness increases, and the scope of positive collaboration is again expanded.

A similar process does not happen for organizations such as armies or police, which mostly rely on cooperative efficacy. Another phenomenon that deserves mention is collectivist societies, where the ruling elite manages to “unite” the individuals, thereby preventing the development of collaborativeness and the emergence of competing groups for a long (but limited) time period.

Thus, in the long-run, negative collaboration is supplanted, whereas the role of positive collaboration grows. It should be underscored that the above reasoning explains the nonmonotonicity of the process, which is a phenomenon demonstrated on the basis of empirical evidence in the article (Polterovich, 2015).

6. The evolution of morality and civic culture

The evolution of morality and civic culture plays a decisive role in the development of positive collaboration. We will now consider the evolutionary trends that are most important in this context.

(A) *The free rider problem and prosocial preferences.* We have mentioned more than once previously that one of the biggest obstacles for the shaping and spreading of collaboration mechanisms is the free rider problem, i.e., the opportunity for agents to exert insufficient effort to achieve common goals while they derive benefits at the expense of their colleagues. The mechanisms of power and market overcome this drawback, at least partially, but with significant costs. In principle, the problem can be solved through collaboration, if every act of “slacking” is followed by a corresponding punishment that is dealt by the members of the group. This mechanism has been studied in many papers (see Axelrod, 2006; Bowles and Gintis, 2011, Ch. 5, which contains the main results and references). However, if the number of selfish participants is large, it requires that they appreciate the future highly enough to compensate for the costs that are associated with punishing free riders. Most importantly, they should receive common signals about transgressors. Otherwise, the individual who punishes a free rider may himself be perceived to be a free rider. It turns out that, for collaboration to occur, a group only needs to have a relatively small number of agents whose behavior is characterized by strong reciprocity, i.e., the willingness to cooperate and punish free riders, regardless of the benefits they receive (Gintis, 2003). For the emerg-

¹⁰ Seemingly, the spreading of leadership qualities within a society plays an important role in this process (see Platow et al., 2016, and King et al., 2009). This is an interesting topic for further research.

ing relationship of collaboration to be sustainable, mechanisms are required to transmit the respective behavioral standards to future generations.

The formation of prosocial preferences is the most important of those mechanisms. An individual's preferences are called prosocial¹¹ if he or she cares about the well-being of the other members of a particular community and strives to maintain the standards that encourage collaborative behavior. Such an individual apparently is an altruist. Altruism occurs under the influence of religious dogmas,¹² social norms that encourage a caring attitude towards others, school and family upbringing. The latter may play a positive role if the parents, in the care for their children, are confident that prosociality will improve their children's well-being. In this case, they are willing to pay the costs of nurturing altruism, ensuring its reproduction (Dixit and Levin, 2016). Because the expenses per child grow together with economic development, one can assume that the degree of altruism also rises.

The above reasoning calls for an explanation of how prosocial preferences emerged. The more plausible hypothesis is that they took shape as a result of competition between groups caused by natural selection: prosociality improved the group's chance of survival (see discussion and reference in Bowles and Gintis, 2011, Chs. 6, 8).¹³ One can assume that intergroup competition, followed by interstate competition, remained an effective mechanism until survival was primarily associated with the possession of natural resources. As is noted above, due to technical progress with its increasing return to scale, as well as the development of institutions and culture, the radius of effective collaboration increases, thereby facilitating the supplanting of competitive mechanisms.

(B) *Internalization of moral norms.* The systems of morality that have formed in all of the main modern cultures rely upon the aforementioned Golden Rule of morality. In particular, it prescribes honest and faithful behavior towards all people, regardless of the groups to which they belong.¹⁴ This means a condemnation of opportunism, which brings forth the free rider problem and acts as one of the main obstacles for building collaboration mechanisms.

An existing norm in a society may be maintained by organized coercion, social approval or condemnation, or through the interiorization (internalization) of norms. In the latter case, the incentive to follow a norm comes from an individual's own assessment of their behavior, rather than from external influence. By acting wrong in his own opinion, such an individual would feel dissatisfaction or even remorse. Trying to avoid these emotions, he would behave in accordance with the internalized norm.

Coercion through violence requires considerable costs, while social approval or condemnation is not always effective. The internalization of the norms of

¹¹ Sometimes the term "social preferences" is also used.

¹² The Golden Rule of morality and a stronger Christian dogma: "Love thy neighbor as thyself."

¹³ Mechanisms that shape altruism are reviewed in Kurzban et al. (2015). It would be relevant to combine them with a historical context.

¹⁴ "The Golden Rule, in its short form, contains the ethical strategy of behavior worded ...as opposed to the moral standards ...for the pre-civilizational (tribal, clan) way of life, which was based upon two fundamental principles: (a) the primordial, unconditional division of people into "us" and "them"; (b) the collective responsibility of individuals within a tribe. The Golden Rule set a moral perspective which abolishes both principles in a radical way. In contrast to them, (a) it declares the equality of people, regardless of any group they may belong to, and (b) it asserts the principle of individual responsibility for behavior" (Guseinov, 1972).

honesty and integrity reduces the cost of collaboration. It is usually considered to be the result of upbringing, the effects of culture and social policies. An overview of this topic is found in Kuczynski and Knafo (2014), with a number of examples in Nyborg (2003).

A question arises as to whether, in the course of social development, the process of internalizing norms, which follows from the Golden Rule, will become more popular and more effective. In other words, does it encompass an increasingly larger number of people and ensure an increasingly consistent observation of a norm by a specific individual?

There are a number of arguments in favor of an affirmative answer to this question. In particular, we know that the number of murders in Europe per 10,000 people has decreased since the 12th century (Eisner, 2003). On shorter time horizons, the number of crimes has generally changed nonmonotonically. However, it has been falling in developed countries over the past 20 years.

This hypothesis is indirectly supported by the negative correlation between the frequency of violations of moral standards and the level of economic development, which is measured based on per capita GDP (or GNP). This correlation is found, in particular, in cross-country comparisons of corruption indexes, in experiments to evaluate the frequency of dishonest behavior (Hugh-Jones, 2015), and in student attitudes towards cheating (Magnus et al., 2002). However, the difficulty is that evolution may be caused by changes in the intensity of external coercion, e.g., by the strengthening of police control and increased effectiveness of investigative agencies. The study of norm interiorization trends in the process of social development remains an important objective.

(C) *Increasing the value of the future.* There are reasons to presume that increasing the value of the future in individual decision-making, while reducing the weight of short-term benefits, helps to augment moral standards and reduces the probability of opportunistic behavior. This process is closely related to the increasing role of the integral social evaluation of an individual, i.e., reputation, in his interactions with other people. A common measure of the value of the future for an individual is the discount rate, which reflects the equivalence of two sums of money received in successive moments in time.¹⁵ A decrease in the norm actually means an increase in the individual planning horizon.

It is well known that the planning horizon increases as an individual becomes wealthier (see, e.g., Strulik, 2012). Therefore, it seems quite plausible that in the process of social development, the typical individual planning horizon increases. Nevertheless, this is still a hypothesis.

(D) *Expansion of a culture of tolerance.* It is almost obvious that, over time, the number of tolerant people grows in developed countries, while their tolerant attitude applies to an increasingly wider group of counterparties. However, a detailed analysis of this process would be rather helpful. To the best of our knowledge, only sporadic historical studies now exist on this topic (see, e.g., Bikk, 2007).

¹⁵ More precisely, the time function r_t is called the discount rate for an agent if, for him, the sum of money m_t , which is received at the time t , is equivalent to the sum $mt/(1+r_t)$, which is received at the time $t-1$ (provided there is no inflation). The lower the rate, the higher the value of future goods for the agent. In modeling, the discount rate is usually regarded as positive and often constant. In this case, the value of goods in the remote future nears zero; therefore, a fall in the rate actually means an increased planning horizon. It should be noted that in the English-language literature the term patience is used to describe an individual's attitude towards the future.

(E) *Increasing the level of trust.* An overview of the extensive literature on the issue of trust is provided in Belyanin and Zinchenko (2010). The same work cites data (p. 16) that proves that the index of trust tends to increase with growth in per capita GDP for the country, although there are some prominent exceptions. Those can be partially explained if trust is characterized not only by its degree but also by the size of the group of people with which an individual actually interacts (see Delhey et al., 2011). The process of changing trust was not, apparently, monotonic: during urbanization, the degree of trust fell, while the radius of trust gradually grew. This was most likely supported by the proliferation of a culture of tolerance.

One can assume that sharp institutional changes lead to lower levels of trust. A study of the changes in social capital (Partz, 2013) confirms our assumptions. All of the four indexes of social capital mentioned therein, which reflect cumulative trust, institutional trust, participation in formal networks, and respect towards social norms, improved substantially from 1990 to 2008 for Western European countries; however, they deteriorated for Central and Eastern Europe (where their values were considerably lower during the entire period).

Further research is required to verify the formulated hypotheses.

(F) *Social responsibility of business.* The spread of ideas that the goal of business should not be restricted to deriving profit, that business is not only a private matter for the owner and manager, and that “corporate leaders are responsible for their corporations’ impact on society and the natural environment” (D’Amato et al., 2009, p. 11), reflect the recognition of the flawed nature of “free” competition as the basic principle for organizing economic interactions. The acknowledgement of social responsibility promotes the embedding of mechanisms of collaboration with consumers and other firms into the mechanism of competition. Usually, collaborating firms receive competitive advantages that, in principle, may have negative consequences for other businesses and sometimes—paradoxical as it may seem—for the society as a whole. However, the latter case includes the mechanism described above: the new “alliance” runs into resistance not only from competitors but from social forces as well. As a result, it is either destroyed or modified in a way to increase its membership and demonstrate its utility to the society.

(G) *Spread of cosmopolitanism.* The spread of cosmopolitanism not only acts as a foundation for expanding collaboration in the relationships between countries, but it also has a positive impact on the opportunities for collaboration within countries. Delanty (2014) cites good examples that show: the ideas of cosmopolitanism are gaining popularity. They should be accompanied with quantitative studies.

(H) *The ideology of collaboration and the role of reputation.* The spread of the culture of tolerance, cosmopolitanism, and altruism undoubtedly prevents negative and encourages positive collaboration mechanisms. An increase in the radius of trust has a similar effect. The interiorization of the aforementioned norms reduces the costs of positive collaboration. Increasing the relevance of the future in decision-making (extending the individual planning horizon, reducing discount rate), while strengthening the role of reputation, promotes the strengthening of moral norms and reduces the probability of opportunistic behavior.

7. Certain patterns of evolution

To summarize the intermediate results, we will now describe certain patterns that are inherent in the evolution of the mechanisms studied herein.¹⁶ As is mentioned in the introduction, these patterns only fully manifested themselves in developed countries in the second half of the 20th century.

(A) The trend towards making the mechanisms of competition and power harsher, which dominated the initial stages of their formation, changes to an opposite trend during the evolutionary process.

(B) The softening of competition and power largely occurs because the institutions of collaboration are embedded into those mechanisms. Herewith, agents strive to reduce costs. This embedding process can be observed, in particular, in the evolution of the institutions of bankruptcy (Tabb, 1995), antitrust laws and cooptation¹⁷ (Brandenburger and Nalebuff, 1996), the development of consensus-based political systems (Lijphart, 2012), the improvement of parliamentary committees (Longley and Davidson, 1998), and the emergence of new forms of interstate interaction, such as the UN and EU.

(C) The very process of competition encourages actors to unite to improve competitive strength. Thereby, competition moves to a level of larger formations, for example, in the economic sphere—from small firms to large corporations, to alliances and to international associations. However, the need to cooperate arises at higher levels as well.

(D) “Milder” versions of competitive mechanisms appear, such as monopolistic competition, tenure institution, and labor unions in the labor market.

(E) The government policies in developed countries increasingly help to embed positive collaboration into competitive mechanisms (mention bankruptcy laws, antitrust laws, the creation of clusters, technology parks, and technology platforms) and to delegate power to institutions of civil society, particularly to business associations (Zudin, 2009) and labor unions (see, e.g.,: Ahlberg and Bruun, 2005).

(F) Some of the above-mentioned processes may occur spontaneously, without being realized by the participants (they are described, for example in the theory of cooptation). However, the most important trend is the increasing will of people to collaborate, without the goal of gaining advantages exclusively for members of the coalition. This will, to a large extent, is manifested in the development of the institutions of civil society, including international ones.

(G) The increasing role of collaboration does not mean that competition has vanished altogether. Most likely, it will retain its significance as a mechanism for improving the effectiveness of collaboration.

(H) In a similar way, the existing systems of power will not vanish altogether; however, one of the two main functions of power comes to the forefront, i.e., coordination, while the role of coercion will be substantially reduced.

(I) In the process of development, the relationship between the three main types of coordination, i.e., competition, power, and collaboration, changes non-monotonically.

¹⁶ For a more detailed rationale regarding the (A)–(E) theses, see Polterovich (2015).

¹⁷ Cooptation means interactions that feature both competition and cooperation. A typical example of cooptation is a contract signed by market agents.

8. Positive and negative collaboration in catching-up development

The experience of the countries of the economic miracle shows that, to achieve success in catching-up development, a country must build an institutional trajectory to ensure a gradual transition to the best technology and business practices (Polterovich, 2007, 2016b). The components of this trajectory, i.e., interim institutions, should meet the existing constraints and, while ensuring movement towards a specific goal, attenuate them, thus creating the conditions for the next step. Standard constraints include the special features of civic culture, such as low general trust, paternalism, passiveness, and a short planning horizon. This explains the institutional structure of successful countries, which is aimed at both the development of competition and overcoming cultural constraints through the gradual formation of a collaborative relationship among the state, business, and society.

The need for close interaction between the government and the private sector to implement an economic policy has been particularly stressed by Chalmers Johnson in his theory of the “developmental state” (Johnson, 1982). At the initial stages of modernization, collaboration relied on paternalism and/or a small radius of trust, which was gradually expanded. In this regard, we should mention interim institutions, such as the system of lifetime employment and the main bank system in Japan and other East Asian countries (Wu and Yao, 2012), township and village enterprises in China, *kibbutzim* in Israel, and *Bausparkassen* (building societies) in Germany and Austria after World War II (Polterovich and Starkov, 2007). According to P. Masse, who created the first system of indicative planning in France, the main advantage of this system was to ensure an environment of trust and collaboration among the state, business, and labor unions. The success of the reform implemented by L. Erhard in West Germany after World War II is attributable to a large extent to an active redistributive social policy pursued by the state, which ensured the trust and support of the population (Stolper and Roskamp, 1979).

Heretofore, we have regarded situations where the reformer chose interim institutions adequate for cultural, institutional, and other constraints, as a result of which the reforms were successful. Ignoring constraints leads to failure. Revolutions and shock reforms usually entail an increase in crime, increased activity by mafia clans, and the emergence of economic and political alliances that aim to redistribute property and power. We will now consider a few examples.

Shock liberalization provides rights to a great number of agents that the majority cannot or do not want to exercise. Under conditions where only a small number of agents possess a high level of collaborativeness, unclaimed rights become an object of sale and purchase or capture, which leads to abuse. This is what happened in the United States in the early 19th century, as a result of an abrupt abolition of election barriers, and in Russia in 1992. In both cases, the acquisition of votes by interest groups led the society into corruption traps. Another example is the introduction of bankruptcy law in Russia in July 1992. At the time, almost all of the firms were indebted to each other, so that none of them had the courage to defend their right to recover debt. At the same time, “artisans” appeared who bought up debts to bankrupt relatively efficient companies (Polterovich, 2007, pp. 79–80, 226–230).

Shock reforms cannot ensure the necessary sequence of transformations, this usually leads to their failure. Privatization without a well-oiled taxation system or efficient property rights protection led to the growth of the shadow economy and the dominance of mafia clans during the Russian reforms. The liberalization of prices without antitrust laws, the creation of a government bond market when the conflict of interest concept did not exist in the culture and had no legal form, were inevitably detrimental for Russia's transition to a market economy.

In all of the situations that are described, only small interest groups benefited that were capable of negative collaboration, and they met no resistance because the general population was passive.

9. On the program of further research

To develop the proposed theory, we must use the results and methods from a number of disciplines, such as social psychology, cultural studies, political science, legal theory, economic and political history, institutional analysis, and the theory of reform. At the same time, as a number of studies demonstrate, we must engage a wide spectrum of tools, including econometrics, evolutionary game theory, experimental economics, and the theory of graphs. Below are some of the topics that should be developed to achieve a better rationale for the system of views outlined above.

1. *The development of collaboration institutions in the economy, politics, and international interactions.* Above we provide only a few examples. It is advisable to consider the evolution of institutions such as alliances, trade unions, public-private partnerships, and European technological platforms, by using a respective theory. The study of the dynamics of civil society seems to be an especially important area.

2. *Quantitative dynamics of the costs of competition, power, and collaboration.* The above arguments were of a qualitative nature. An important task is to learn how to measure costs to track their changes over time.

3. *The influence of the development of leadership qualities on the evolution of coordination mechanisms.*

4. *Measuring the radius of collaborativeness.*

5. *The dynamics of cooperation, and the evolution of collaborative networks.* An important matter is to identify the conditions under which the graph of collaboration contains exactly one sustainable component (all agents cooperate with each other directly or indirectly). Elaboration on this topic requires methods from the theory of graphs and evolutionary game theory.

6. *The measurement of the radius and degree of trust, their evolution.* Here, as in the elaboration of the next topic, we must identify the methods that would allow us to rely on historical data.

7. *The evolution of the ratio of selfishness and altruism in society on the one hand, and the norms of tolerance and honesty on the other. The management of the evolution of institutions to accelerate their natural development: encouraging collaboration.* The problems that arise here are close to the tasks that are studied in the theory of reform.

10. Conclusions

The authors of the theory of liberalism assumed that “free” competition would act as an element of a “natural order,” as in the time of Kant people thought that the state of war between countries was natural. Both war and competition have accelerated social development. However, modern civilization has condemned war both as a way to improve the well-being of the conquerors and as a mechanism for resolving international controversies. An analysis of the evolution of social institutions demonstrates that competition and the state, as an instrument of coercion, are also losing their dominant positions, giving way to mechanisms of collaboration.

The mechanisms of “free” competition, like mechanisms of coercion, dictate a type of behavior that is contrary to universal ethical standards. Collaborativism strives to resolve the above controversy. As the analysis shows, this philosophy is not utopian because it is consistent with development trends. It turns out that, in the process of social evolution, technological, cultural, and institutional conditions are formed that ensure the growth of the relative efficiency of collaboration.

The escalation of terrorism, which we have witnessed in recent years, will abate as well-being grows and mass culture and institutions improve in Muslim countries. Establishing a philosophy of collaboration in the West makes it possible to hope that similar “developmental diseases” in other areas, particularly in Africa, will be prevented in time.

The foregoing suggests two main conclusions that are related to socioeconomic policy. First, the most important objective is to maintain and develop the institutions of collaboration. Second, this process should not be forced by the violent destruction of the institutions of competition and power. The basic effort should aim to reduce the costs of collaboration and to adequately modernize institutions. We can hope that, unlike the ideologies of “market fundamentalism” and etatism, the philosophy of collaboration will promote the development of effective policies that meet the goals of society.

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