Social Choice and Institutionalism

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INTRODUCTION

The main thesis in this manuscript is that a social choice theory based on aggregating individual preferences and values is insufficient to confront the social choices that today's world is facing. It is defended in here that institutions play a critical role in any social choice, and that the solutions required for today's global problems necessarily require strengthening the international institutions.

Within the last two decades, the world has experienced two global crisis and the largest war since the Second World War. Moreover, there are ongoing challenges that need to be confronted like the global climate crisis, the rise of international crime, poverty, and underdevelopment. Instead of deepening globalization, the world has experienced a comeback of nationalisms that will seriously reduce global productivity[1]. The solutions to these global problems cannot be a social choice theory (SCT) aggregating individuals' preferences and values; social choices must include a proper institutional analysis.

In part one of the book, it is shown that socio-economic choices can never be only the consequence of aggregating individuals' preferences + values and that institutions play a decisive role. Part two of the book extends the results of part one to socio-political choices, and it is shown that they also include the critical role of institutions.

This book argues that justice or ethics cannot provide the basis to get away from the impossibility results, because humans do not have access to universal values, and nothing guarantees that partial orderings will be found. This answer has important pragmatic implications. It explains why international aid to the poor is so low. And asserts that ethical benevolence will not be the way in the future to solve the global problem of poverty. Globally we need to appeal to the interests of the developed nations, in terms of the economic benefits that they will receive by providing help to develop the poor nations of the world.

[1] The recent elections of personalities like Trump, Bolsonaro and Boris Johnson, the triumph of Brexit, the recent success of the leftist parties all over Latin America, the protectionist subsidies of president Biden, the commercial war between the US and China, all are signals of the rising national protectionism that will seriously reduce global productivity.

This manuscript asserts that ethics and justice are part of the whole institutional arrangement and conceptual system of the society. Thus, social choice theory (SCT) cannot be used to obtain fair and just solutions. Justice does not depend upon the contemporary "will of the people" (which additionally, we know, cannot be found). This book answers the question of what ethics is with the notion of belonging ethics, which is a non-essential ethics that represents a set of ethics corresponding to the cultural background of the diverse small groups that constitute the society. And it answers the question of what justice is, with the concept of belonging justice, which is a social agreement based upon values and interests that define a common accepted way of life. Justice implies a social agreement, while ethics only implies value considerations. Justice always involves interests, while ethics does not. In Western democracies, social choices do have a serious influence derived from the ethics of human rights. Although, as Rawls has shown, with many inconsistencies; therefore, democratic social choices, in addition to values, reflect interests. At the global level, social choices do not have a serious influence of the ethics of human rights, and therefore global social choices, between nations, are mostly based upon interests.

North's work, it is asserted in this manuscript, has the enormous relevance of having revived the discussion of the importance of institutions in a historical economic analysis, which allows us to understand that a) institutions have a decisive influence on individual decisions and on social choices, and b) that to understand the economic development of a country and the possibilities of accelerating it through institutional design, it is necessary to carefully study its own historical institutional arrangement. However, it is shown that North's proposals are dominated by an element of idealism. North sees history from the perspective of the ideal of the Western individual, which prevents him from appreciating the importance of communal traditions in the economic development of the West, and particularly their definitive role in Asia. The lesson from the successful Asian countries is not that temporarily efficient institutions can be implanted in constant search of the Western ideal, but that there are other possible development paths using the strengths of the institutional history of each of these communities to compete globally with the West. To understand why these Asian countries have been successful, a novel understanding of institutionalism is required that we have called comprehensive institutionalism (CI).

It is argued in here that social choices cannot be properly understood with Sen's SCT. SCT is useful for specific problems in small communities

or groups, but it does not provide a solution for large groups. Sen's SCT has serious limitations. The first limitation of Sen's economics is to leave out institutions from social choices. And the second limitation is that by substituting the *homo economicus* in the markets by the ethical-integral human being, Sen's economics ends up being unable to explain economic growth.

SCT leaves out critical social choices as those related to economic growth, the efficiency of the economic markets, the role of social conflict in social choice, and the role of the civil society. An extended comprehensive institutionalist SCT is presented in this book to further explore these issues. Comprehensive institutionalism (CI) explains why the four most critical socio-economic choices, i.e., economic growth, economic stability, well-being distribution, and poverty elimination, are taken by institutional leaders. CI brings a fresh perspective to the relationship between the problems of economic growth and poverty. CI also presents a new perspective about the world's most pressing problems and argues that their solution requires a much stronger global institutional arrangement.

It is defended in here that representative democracy is a very complex system, sustained by a sophisticated institutional arrangement, in which - for key decisions - experts can be heard, and in which drastic changes are usually avoided by built-in rules of decision that foster social stability and order. And it is argued that informed deliberative participatory democracy, even if it was possible to avoid the impossibility results, is not up to the task to be able to manage social conflict into an adequate social change that leads to a new acceptable social order. It is not today's "will of the people" (even if it could be found) what maintains the required transitional social order – historical institutions are required.

This book, as mentioned, is divided in two parts. Part one, includes the first four chapters, and presents the economics of social choice. Part two, contains the last three chapters, and discusses the politics and ethics of social choice. In what follows we detail the results obtained in each chapter.

The first chapter proves that aggregating individuals' preferences + values to obtain a social choice without the decisive participation of institutions is impossible, because of the following reasons: 1) the computational tasks required from each individual become impossible to perform, 2) deliberation amongst large groups is also an impossible task, 3) even if deliberation was possible amongst large groups, nothing guarantees that common values (even if only partial) exist, so that partial orderings may not be reached, 4) social groups that contemplate each other as "outgroups" establish the relation between them based on interests and not on

values. Moreover, game theory and information economics have shown that there exist multi-equilibriums, and therefore the final equilibrium depends critically upon the institutional arrangement.

Chapter two exhibits that Sen's contributions in economics are not consequence of his social choice theory (SCT), but of his philosophical rational preconceptions and his pragmatism, that have provided new lenses as to how understand justice problems such as: poverty, well-being distribution, comparative deprivation, and gender inequality.

Chapter three uses the results of neoinstitutionalism in economics (NIE), mainly North's, to establish the critical role of institutions in socio-economic choices. However, NIE restricts its analysis to Western-like institutions.

Chapter four introduces a comprehensive institutionalism (CI), a more extensive institutionalist perspective that includes non-Western institutions to be able to explain the economic success of key Asian countries.

Chapter five discusses socio-political choices and shows that they are never only the consequence of aggregating individual votes, and that institutions are highly influential.

Chapter six exposes that democratic choices are insufficient to adequately channel social conflict into social changes that establish a new beneficial social order, therefore the continuity provided by institutions is required.

Chapter seven shows that although there are evolutionary bases common to all the ethics, there are not common values (even partial) between them, which may guarantee that at least partial orderings can be established. The individualistic approach followed by Sen and others gets rid of Arrow's impossibility results through ethical value judgments, even if they are only partial orderings, that allow interpersonal comparisons and other deliberative solutions. But the question is: Where do such value judgments come from? Since human beings neurobiologically do not have access to external moral truths, the only acceptable solution is that these judgments are cultural concepts that correspond to a given historical institutional arrangement of a specific society. Moreover, the axiomatic aggregation of individuals' preferences + values becomes unmanageable in large groups. Therefore, most critical social choices are taken by institutions. Finally, chapter eight presents a summary of the conclusions obtained in the book. The annex presents the analytics of social choice.

PART ONE: THE ECONOMICS OF SOCIAL CHOICE

CHAPTER ONE: THE FAILURE OF WELFARE ECONOMICS, SCT, AND OTHER THEORETICAL RESULTS

Welfare economics must be understood in the historical context of the neoclassical economists' effort to develop a value theory, based on price markets, consequence of the independent preferences of individual economic agents. This effort is a result of both the failure of labor value theory, and the development of individualistic values in the Western societies, particularly in the Anglo-Saxon world. Adam Smith had shown that economic growth was consequence of technological development, largely due to the enlargement of the private markets, consequence of free trade. Later, when Ricardo and Marx wrote, economic growth was already unusually fast, compared with previous historical periods, and was taken for granted, and seen as a "natural outcome of global capitalism". Therefore, these authors concentrated on the theory of value. Ricardo proposed the theory of incorporated labor, which was never successful, due to the lack of a numeraire. Sraffa in the *Production of Commodities by Means of Commodities* found the numeraire, buy only for the very restricted case of a static non-monetary economy. The failure of the theory of incorporated labor was understood by Marx, who consequently developed his theory of "social necessary labor"; which indicated that labor only has value if it is revalidated by market prices. Thus, labor value theory became a tautology, that for Marx had a philosophical meaning but which technically did not have any relevance, because it did not provide any additional information to the one already contained in the market prices. The failure of the labor value theory, due to its dependency on market prices, meant that the focus had to be in a price theory, which became the neoclassical school's objective. The neoclassical project was very ambitious, and it had three recognizable goals: 1) develop a price theory; 2) show that private markets' prices had a unique, stable equilibrium defined out of the independent preferences of the economic agent, the technological frontier, and the endowments; and 3) show that the market equilibrium optimizes the social economic welfare. Of these three goals, only the first one was achieved.

In this first chapter we will first review the failure of welfare economics, which aimed at reaching the third goal, and then we will discuss the failure of general equilibrium theory to reach the second goal. Both failures, however, have enriched our understanding of both the economic and the social worlds, and have created new techniques of analysis that have resulted critical to understand key social and economic problems. Among these new techniques of analysis, we find information theory, game theory, neoinstitutionalism in economics (NIE), and social choice theory (SCT). The failure of welfare economics and general equilibrium theory to show the existence of a unique, stable, optimum equilibrium in private markets has critical implications to the way we approach social and economic problems. The existence of multiple equilibriums means that the market equilibrium critically depends upon the institutional arrangement. That is why, in other works, I have insisted on the need of a comprehensive institutionalism (CI). CI, while incorporating the scientific advances of diverse schools in economics (like for example, the importance of private markets for economic growth), brings to the forefront the importance of a well-designed institutional arrangement.

In the first section, we trace what we have learned in each historical attempt of welfare economics to show that markets optimize the social economic welfare, we discuss why welfare economics failed to reach its goal, we introduce Arrow's impossibility theorem, and show how it leads to Sen's defense of a positive SCT, capable to solve real cases. We leave for the next chapter a broader view of Sen's economics. In the second section, we briefly discuss what both the failure of welfare economics and the development of SCT means in the context of information theory, game theory, and neoinstitutionalism in economics (NIE). These other schools have shown the existence of multi-equilibriums, that may exhibit underemployment and/or underdevelopment. Some of which may be Pareto optimal, and many of which are non-Pareto optimal, like for example the Nash equilibriums. We conclude that, since any economic equilibrium critically depends upon an institutional arrangement, social choices also are critically dependent on such an institutional arrangement. From this perspective, then, SCT can be seen as a helpful technique for institutional design.

THE FAILURE OF WELFARE ECONOMICS AND SCT

The Failure of Welfare Economics

The story of welfare economics starts in the first decades of the twentieth century with the publications of Pigou's books on welfare in 1912 and 1920, and concludes with the publication of *Collective Choice and Social Welfare* in 2018 by Nobel laureate Amartya Sen[2]. There were four attempts to show that markets do maximize social economic welfare, and the four failed.

First Attempt

It started with Jevons pointing out that the labor-value theory could not be applied to things that lack value; for him, utility arises in things because of its relation to human needs. In the works of Jevons, Menger, and Walras, marginal utility becomes the essential element of consumer behavior; and they find a rule to transform subjective value into measurable quantities. Wicksteed transformed the utilitarianism of Jevons into a scale of preferences and analyzed the utilization of resources to the maximum for a certain purpose. Menger, on the other hand, developed his theory in terms of needs, and not in terms of pleasure as Jevons did. For Pigou, economics was a science because it dealt with measurable amounts of satisfaction. Marshall and Pigou accepted the law of incremental marginal utility and assumed that different people obtain the same satisfaction from the same income; under this assumption, an egalitarian society would maximize social welfare.

Marshall's and Pigou's conclusion was shown as invalid, because satisfactions cannot be added, and therefore we must use an ordinal ranking, and not a cardinal number. Since we cannot measure utility in a cardinal way, we cannot compare the marginal utility derived from the income of different individuals and, therefore, we cannot affirm that an egalitarian distribution of income maximizes welfare.

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[2] Sen, A. K., 2018. *Collective Choice and Social Welfare*. Penguin Books Ltd. Kindle Edition

SECOND ATTEMPT

Pareto and Barone presuppose independence between the different satisfactions of people, and the absence of external economies and diseconomies. With this frame of reference, it is possible to separate efficiency from equity – i.e., justice considerations, which is known as the Pareto principle. Kaldor considered that the economist should be in favor of any change that improves the efficiency of the system; because if inequalities are created, the winners can always compensate the losers. Hicks, like Kaldor, argues that economists should make recommendations only based on efficiency, since the gains and losses are random at the individual level.

Three criticisms were made to Kaldor: 1) it is not always possible to measure efficiency (Scitovsky); 2) the consumer surplus used by Kaldor, based on partial equilibrium, can give wrong efficiency results (Samuelson), and 3) compensatory payments are not always politically feasible. Little criticized Hicks and pointed out that some economic changes can cause large changes in the distribution of income; he observed that we cannot expect these to be compensated in the future.

It is particularly relevant to understand Scitovsky's criticism of Kaldor, through what was to be known as the Scitovsky paradox. It says that having shown that a position B is more efficient than a position A - according to the criterion of Kaldor and Hicks -, using the same criterion it can be shown that after the community has adopted position B, A can become the preferred position. The reason for the paradox is that there is a reciprocal relationship between the social valuation of the bundle of goods and their distribution.

Samuelson showed that, even in those cases in which the Scitovsky paradox does not occur, we do not have a criterion to define the optimal solution. Since once it is understood that the preference judgments about the bundles of goods A and B are different in the case of the two distinct distributions, which correspond to positions A and B, it follows immediately that that there is a need to understand what happens when there are other distributions, because A and B are not the only feasible ones. Due to the above, Samuelson concludes that the only way we can be sure that B is better than A is in the case where, for all possible welfare distributions, B is preferred to A. And, like Samuelson demonstrates, the above condition is satisfied only in the extreme case, and without economic interest, in which B has more of each good than A (assuming there is no

disutility). This conclusion shows conclusively that there is no real efficiency rule. Any efficient solution depends upon the given distribution of resources.

THIRD ATTEMPT

Faced with the impossibility of making economic policy recommendations based solely on efficiency, Bergson introduced the notion of a complete Social Welfare Function (SWF), which adds the social preferences of individuals about the social states (including the distribution possibilities), so that the economist can forget about the problems associated with distribution. Samuelson gave an elegant exposition of the mechanism by which social welfare is maximized in the tangency between the SWF and the production function (the one that optimizes the use of resources). However, Arrow showed that it is not always possible to add the social preferences of individuals, so that we cannot always build s SWF.

Arrow's Theorem

Arrow starts by establishing five common-sense criteria that a social aggregation of individual preferences must fulfill: 1) Universal domain – it has to cope with any level of pluralism in its inputs. 2) Ordering - it has to produce rational (transitive) social preferences. 3) The weak Pareto principle - when all individuals strictly prefer alternative x1 to alternative x2, so does society. 4) Independence of irrelevant alternatives - the social preference between any two alternatives x1 and x2 depends only on the individual preferences between x1 and x2, and not on individuals' preferences over other alternatives. 5) Non-dictatorship – the absence of a 'dictator', who always determines the social preference, regardless of other individuals' preferences[3]. For a formalization of each one of these criteria please see the annex' part one.

[3] Pairwise majority voting satisfies all of these conditions except ordering. In pairwise majority voting the candidate preferred is taken to be the one in the pair that the voter ranks (or rates) higher on their ballot paper.

Arrow's theorem states that if | X | > 2, there exists no preference aggregation rule satisfying the five criteria reviewed above.
Where **X is the set of social alternatives**

A simple example of the nonexistence of an aggregation rule is as follows.

Example one: Assume three individuals, 1, 2, 3 and three social alternatives, x1, x2, x3. Pi gives the preferences of individual i, and p indicates preferred to.
Then:
P1= x1px2, x2px3, x1px3
P2= x2px3, x3px1, x2px1
P3= x3px1, x1px2, x3px2

Aggregating preferences does not provide a solution, since each individual prefers a distinct alternative. And pair-wise preferences comparison to build the SWF does not provide a solution either, the result will be that the preference aggregation rule has two counts for x1px2, two counts for x2px3, and two counts for x3px1; which implies both that there is no solution, and the aggregation is not a rational (transitive) solution.

The generality of Arrow's impossibility theorem leaves no doubt that the third attempt failed.

THE FOURTH ATTEMPT, SCT

There is no possible way out of Arrow's theorem without relaxing one or several of the five criteria used by this author. Does it make sense to relax Arrow's criteria? From a pragmatic point of view, to be able to build a SCT with relevance for real-life, specific economic and social problems, it does. And, in fact, SCT has been a success story. However, from a theoretical point of view, relaxing any one of the five criteria already implies a failure of the neoclassical's aim to show that a private market optimizes social economic welfare.

Sen has shown that if we allow for interpersonal comparisons, Arrow's impossibility theorem does no longer hold. But what does allowing interpersonal comparisons mean? It means that we must include external judgments. And where do such external judgments come from? There are two alternatives: universal accepted values, or institutional accepted rules and decisions. Either we introduce the notion of ethical humans,

holding at least a subset of common universal ethical values, or we are forced to accept that the external judgments must come from accepted institutional rules and decisions, that vary across historical times and across cultures. Since, as I have shown in other works[4], there do not exist neurobiological basis to hold the view that humans have access to universal ethical values, it follows that the external judgments do in fact come from institutional rules and decisions. This has huge implications, because institutional rules and decisions are a function of a particular institutional arrangement; and therefore, there does not exist a unique SWF that optimizes the social economic welfare – but many SWF which become a function of the institutional arrangement. Without doubt the fourth attempt failed. We ended up having several distinct equilibriums – related to diverse institutional arrangements. Any new institutional design produces a different equilibrium, some of which may be Pareto optimal, but many others will not be Pareto optimal.

Social Choice Theory (SCT)

In the real world, social choices do ocurr. Understanding how they happen and how to improve them is an important task. In the Western societies, with well differentiated individuals that possess socially granted individual rights, for a set of specific problems, it becomes crucial how to aggregate individual preferences into social choices. But it must be clear from the start that social choices not only include individuals' preferences + values, they also always involve institutional rules and decisions, which are also a component of the social choice. At the formal level, relaxing one or several of Arrow's criteria is equivalent to introduce institutional rules and decisions. Thus, from this perspective, SCT could be seen as an analytical tool to explore the consequences of adopting certain institutional rules and decisions.

We can trace the beginning of SCT back to Sen's criticism of Arrow's impossibility theorem. Sen argued that in the real world, interpersonal comparisons are made. And he is right. But what we must emphasize here is that introducing interpersonal comparisons necessarily implies institutional arrangements, which are the ones providing the rules or de-

[4] Obregon, C., The Philosophy of Belonging, 2nd edition. 2021. Amazon.com. Also available at Research Gate.com

cisions to be able to do the interpersonal comparisons. And once institutional arrangements are involved in the solution, we enter a world of multi-equilibriums, corresponding to distinct institutional arrangements, that violates the neoclassical goal to be able to prove that private markets optimize social economic welfare. From this perspective, Arrow's impossibility theorem shows the impossibility to build a society uniquely out of individual's preferences + values. And Sen's introduction of interpersonal comparisons is the explicit recognition of the dependence of the final market equilibrium on the institutional arrangement, and therefore the possibility of multi-equilibriums. Arrow's impossibility theorem negates conclusively the neoclassical possibility to prove that private markets optimize social economic welfare; thus Arrow's contribution closes and 'old-world' discussion, and he receives a Nobel prize for this. Sen receives the Nobel prize for inaugurating a 'new-world', one that allows interpersonal comparisons, and therefore allows for multi-equilibriums, Sen creates a new technique of analysis – SCT.

Building SCT by Relaxing Arrow's Criteria

To understand why relaxing one or several of Arrow's criteria is a way out of his impossibility theorem, lets us take another look at the example of three individuals and three social choices given above. Let us assume that x1 = capitalism, x2 = socialism, x3 = communism. Then P1 implies that individual 1 prefers capitalism to socialism, socialism to communism and capitalism to communism; P2 that individual 2 prefers socialism to communism, communism to capitalism, and socialism to capitalism; and P3 that individual three prefers communism to capitalism, capitalism to socialism and communism to socialism. Each individual's preferences are transitive and rational. Although one could argue that they are ideologically misaligned, there is nothing wrong with this. Ideologically aligning will imply that if individual three prefers communism to capitalism he also prefers socialism to capitalism. Then, if we realign ideologically the individual's three preferences, we obtain P3 = x3px1, x2px1, x3px2. Now, although still there is no solution in simple counting, because each individual still prefers a distinct alternative, there is pair-wise voting transitive (rational) solution. We have two counts for x2px3, two counts for x3px1 and two counts for x2px1. Thus, the social choice x2 is selected. Therefore, one of the ways to get away from the impossibility result is to realign

the preferences of the individuals along an ideological dimension; we violate the criteria of a universal domain, but the impossibility goes away.

Black[5] showed that if each profile Pi can be aligned from "left" to "right" on some cognitive or ideological dimension (that is, if we exclude or transform cases like P3 in the example) then it can be linearly ordered and shows *single-peakedness;* and then the SWF has a solution. Moreover, pairwise majority counting satisfies the rest of Arrows' conditions[6]. Other domain restrictions have the same implications, such as: *single-cavedness*[7]*, separability into two groups*[8]*,* and *latin-squarelessness*[9]. Sen showed that all these conditions imply a weaker condition that also works *triple-wise-value-restrictions*[10]. From the point of view of real policy issues, restricted domains may work in specific circumstances, but a more interesting real question is whether domain can be restricted through deliberation between the individuals focusing them on a shared cognitive or ideological dimension so that they agree in a restricted domain, a *meta-agreement*[11]. Experimental results have been positive[12]; but further work is needed, and some criticisms have been raised[13]. The simple example discussed above already shows that in certain cases changing individual preferences may be an almost impossible task, convincing an individual to prefer capitalism to socialism instead of social-

[5] Black, D., 1948, "On the Rationale of Group Decision-Making," *Journal of Political Economy*, 56: 23–34.

[6] Arrow, K., 1951/1963, *Social Choice and Individual Values*, New York: Wiley.

[7] Inada, K.-I., 1964, "A Note on the Simple Majority Decision Rule," *Econometrica*, 32: 525–531

[8] Ibid.

[9] Ward, B., 1965, "Majority Voting and Alternative Forms of Public Enterprises," *The Public Economy of Urban Communities*, J. Margolis (ed.), Baltimore: Johns Hopkins Press.

[10] Sen, A. K., 1966, "A Possibility Theorem on Majority Decisions," *Econometrica,* 34: 491–499.

[11] Miller 1992, Knight and Johnson 1994, Dryzek and List 2003. Miller, D., 1992, "Deliberative Democracy and Social Choice," *Political Studies,* 40 (special issue): 54–67. Knight, J., and J. Johnson, 1994, "Aggregation and Deliberation: On the Possibility of Democratic Legitimacy," *Political Theory,* 22: 277–296. Dryzek, J. and C. List, 2003, "Social Choice Theory and Deliberative Democracy: A Reconciliation," *British Journal of Political Science,* 33: 1–28.

[12] List, Luskin, Fishkin; and Mclean 2013. Rafie Rad and Roy 2021. List, C., R. C. Luskin, J. S. Fishkin, and I. McLean, 2013, "Deliberation, Single-Peakedness, and the Possibility of Meaningful Democracy: Evidence from Deliberative Polls," *Journal of Politics,* 75: 80–95. Rafiee Rad, S. and O. Roy, 2021, "Deliberation, Single-Peakedness, and Coherent Aggregation," *American Political Science Review,* first online 22 February 2021. doi:10.1017/S0003055420001045

[13] Ottonelli, V. and D. Porello, 2013, "On the elusive notion of meta-agreement," *Politics, Philosophy and Economics,* 12: 68–92.

ism to capitalism may be awfully difficult, if not impossible. We will further discuss the limitations of the deliberation method in the following chapters: but in any case, the need for deliberation, or alternatively the requirement to exclude a subset of preferences, already shows that value judgments (institutions) are required to get away from the impossibility results.

In addition to relaxing the universal domain discussed above, relaxing other of Arrow's criteria has been explored in the literature. As it is explained in the annex' part one, neither relaxing ordering, the weak Pareto principle, or the independence of irrelevant alternatives, seem to be promissory routes. Thus, the two ways out of Arrow's impossibility theorem are relaxing universal domain, already discussed, and relaxing interpersonal comparisons, which will be discussed below. The first way constrains the domain, while the second shifts the constants used for diverse individuals allowing for interpersonal comparison. Both ways may change the original individuals' preferences, relaxing the universal domain by realigning preferences through deliberation along an ideological or cognitive dimension, and interpersonal comparisons by enriching the informational basis in several distinct manners, of which deliberation may be one. While constraining the domain may be justifiable under certain specific conditions, in the general case it cannot be justified. Therefore, interpersonal comparisons seem to be a more acceptable general way out of the impossibility theorem, because - as Sen has argued - in real life interpersonal comparisons are always made. Which, however, still leaves out the question of: What are the implications of allowing such interpersonal comparisons?

Interpersonal Comparisons

It has been shown by Sen and others that a way out of the impossibility results is to replace rankings of alternatives in an order of preference by enriched informational basis to sustain the social choice. There are two possible ways to do this: 1) allowing interpersonal comparisons, and 2) to replace preference orderings with qualitative rankings of the alternatives. The main concern of this second option is that grades do not have the same common meaning for all individuals, which renders the exercise unmeaningful[14]. Therefore, in what follows we will concentrate our discussion in interpersonal comparisons.

[14] Morreau 2016 Morreau, M., 2016, "Grading in Groups," *Economics and Philosophy,* 32: 323–352.

To allow for interpersonal comparisons let us define a welfare function as **W**i = F(Pi) which in addition to Pi contains more information. Pi is the individual i personal preference ordering, which is a complete and transitive binary relation on X (the set of social alternatives). The combination of preference orderings across the individuals is called a profile P = (P1, P2… Pn). A preference aggregation rule PA is then a function PA= F (P).

And the social welfare profile is PA**W** = (**W**i, **W**2,…,**W**n). Thus, the Social Welfare Functional SWFL = F (PA**W**), where F assigns a Social Welfare Function (SWF) in some domain of admissible profiles; F technically depends upon the assumptions used about measurability and interpersonal comparability of welfare; F then obeys some meaningful statements that provide additional information. The transformation of F is made without losing information as to the preferential ordering of each individual, but adds additional information that allows interpersonal comparability. The original PA is re-scaled without loss of information, but the shifting constants used for diverse individuals may be distinct; thus, allowing for interpersonal comparison. F may be an ordinal or a cardinal transformation. From this perspective Arrow's theorem only holds because of the lack of interpersonal comparability.

Several criteria could be used to create F, examples are classical utilitarianism, the head-count method of poverty measurement (assuming certain minimum poverty is a social goal), Rawls' difference principle, and Sen's capabilities. F then enters the realm of social judgments.

F has been used in many applications such as distributive justice[15], improvements in standard cost-benefit analysis[16], health problems[17], variable population choice problems[18], and many other problems. SWFL has been generalized to multiple individual welfare functions capturing multiple opinions about each individual's welfare function[19], or multiple dimen-

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[15] Roemer, J. E., 1996, *Theories of Distributive Justice,* Cambridge, MA: Harvard University Press.

[16] Adler 2011, 2019. Adler, M. D., 2011, *Well-Being and Fair Distribution: Beyond Cost-Benefit Analysis,* Oxford: Oxford University Press.
---, 2019, *Measuring Social Welfare: An Introduction,* Oxford: Oxford University Press.

[17] Tsuchiya, A., and J. Miyamoto, 2019, "Social Choice in Health and Health Care," *The Handbook of Rational and Social Choice,* P. Anand, P. Pattanaik, and C. Puppe (eds.), Oxford: Oxford University Press, pp. 524–540

[18] Blackbory, Donaldson and Bossert 2005, *Population Issues in Social Choice Theory, Welfare Economics, and Ethics,* Cambridge: Cambridge University Press.

[19] Roberts 1995, Ooghe and Lauwers 2005. Roberts, K.W.S., 1995, "Valued Opinions or Opinionated Values: The Double Aggregation Problem," *Choice, Welfare and Development: A*

sions of welfare[20]. These models in addition to consider measurability and interpersonal comparisons include inter-opinions and interpersonal comparability. Multidimensional SWFL have been used for inequality measurements[21]. And in the philosophy of biology one-dimensional and multidimensional SWFL has been used to discuss group fitness as a function of individual fitness indicators[22].

Arrow understood that allowing interpersonal comparisons would eliminate the impossibility results, but he insisted - as Bergson and Robbins did before him - that they should not be allowed. Why do economists refuse to include interpersonal comparisons? Because they necessarily imply external value judgments (institutions), and the goal of neoclassical economics was to show that economic markets were efficient in optimizing, by themselves, social economic welfare. The quest to separate efficiency from equity does not imply that neoclassical economists were not concerned with social issues; Walras, for example, besides writing a book on general equilibrium problems wrote a treatise on social issues, just as Smith before him wrote the *Theory of Moral Sentiments* in addition to the *Wealth of Nations*. But just as Smith was concerned, in the *Wealth of Nations,* in understanding the social benefits of free markets in promoting economic growth, independently of social value judgments, neoclassical economists were interested in understanding the welfare benefits of free markets, independently of social value judgments.

It is important to understand the relevance of the economists' goal to isolate economic efficiency from social judgments. Let us start with Smith; no doubt he was successful in showing that large free markets encourage technological development and accelerate economic growth. This is a criterion of efficiency. And although it is true that the market is itself an institution, and that an economic market cannot work without institutions,

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Festschrift in Honour of Amartya Sen, K. Basu, P. K. Pattanaik, and K. Suzumura (eds.), Oxford: Oxford University Press, pp. 141–165. Ooghe, E. and L. Lauwers, 2005, "Non-dictatorial extensive social choice," *Economic Theory,* 25: 721–743.

[20] List 2004 a. List, C., 2004a, "Multidimensional Welfare Aggregation," *Public Choice,* 119: 119–142.

[21] Weymark, J., 2006, "The Normative Approach to the Measurement of Multidimensional Inequality," *Inequality and Economic Integration,* F. Farina and E. Savaglio (eds.), London: Routledge, pp. 303–328.

[22] Okasha 2009, Bossert, Qi and Weymark 2013. Okasha, S., 2009, "Individuals, groups, fitness and utility: multi-level selection meets social choice theory," *Biology and Philosophy,* 24: 561–584. Bossert, W., C. X. Qi, and J. A. Weymark, 2013, "Extensive social choice and the measurement of group fitness in biological hierarchies," *Biology and Philosophy,* 28: 75–98.

it is also true that the market has been a particularly efficient institution in promoting economic growth. Neoclassical economists' quest for efficient rules was important, and although they failed in showing that private markets optimize social economic welfare, they were successful in showing that market prices provide an important reference for many key decisions.

SCT´s Success

In addition to the applications mentioned above in the section on interpersonal comparisons, SCT has had many other applications such as: preference and welfare aggregation under risk and uncertainty[23], theories of fair division,[24] theories of matching[25], behavioral choice theory[26], empirical social choice theory[27], topological social choice theory[28], computational social choice theory[29],collective decision making in non-human

[23] Mongin, P., and M. Pivato, 2016, "Social preference and social welfare under risk and uncertainty," *Oxford Handbook of Well-Being and Public Policy,* M. Adler, and M. Fleurbaey (eds.), Oxford: Oxford University Press

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[26] Regenwetter, M., B. Grofman, A. A. J. Marley, and I. Tsetlin, 2006, *Behavioral Social Choice,* Cambridge: Cambridge University Press.

[27] Gaertner, W. and E. Schokkaert, 2012, *Empirical Social Choice: Questionnaire-Experimental Studies on Distributive Justice,* Cambridge: Cambridge University Press.

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[29] Bartholdi, Tovey and Trick 1989, Brandt, Conitzer and Endriss 2013. Bartholdi, J. J., C. A. Tovey, and M. A. Trick, 1989, "The computational difficulty of manipulating an election," *Social Choice and Welfare,* 6: 227–241. Brandt, F., V. Conitzer, and U. Endriss, 2013, "Computational Social Choice," *Multiagent Systems,* G. Weiss (ed.), Cambridge, MA: MIT Press, pp. 213–283.

animals[30], social epistemology[31], and many others. Thus, the success of SCT as a technique that is useful to aggregate individual preferences into social choices, in specific circumstances, and under certain constrains and assumptions, is undeniable.

Conclusion as to the Fourth Attempt

The controversy over welfare economics clearly showed that, as Harrod said, we cannot talk significantly about efficiency and optimal allocation of resources unless we have a market. And the choice of the market as a method of valuation is a value judgment (an institution), since prices imply a given distribution of resources. Arrow's impossibility theorem put an end to the very long-term quest of neoclassical economics to show that markets optimize social economic welfare. And the fourth attempt has failed to reverse this general result. To obtain a SWF we need judgments/values (institutions), external to the market. Sen's contributions however, started a positive SCT relevant to the discussion of many real problems of aggregation of individual preferences. Arrow closed the controversy in welfare economics, which never achieved the originally pursued goal, and Sen opened a new era in which a positive SCT looks for specific solutions for real world problems. Despite its failure to obtain the initially pursued goal, welfare economics has become relevant not only in the development of SCT, but also in the construction of a sophisticated neoclassical price theory that has been key in understanding the efficiency of the private markets to transmit the dynamic preferences of the Western middle class, a key factor in the rapid economic growth of capitalism.

30 Conradt, L. and T. J. Roper, 2003, "Group decision-making in animals," *Nature,* 421: 155–158

31 Goldman 2004, 2010, Lackey 2016. Goldman, A., 2004, "Group Knowledge versus Group Rationality: Two Approaches to Social Epistemology," *Episteme, A Journal of Social Epistemology,* 1: 11–22.---, 2010, "Why Social Epistemology Is Real Epistemology," *Social Epistemology,* A. Haddock, A. Millar, and D. Pritchard (eds.), Oxford: Oxford University Press. Lackey, J., 2016, "What Is Justified Group Belief?" *Philosophical Review,* 125: 341–396.

WELFARE ECONOMICS, SCT AND OTHER THEORETICAL RESULTS

Welfare economics was built under several assumptions such as: individuals that do not play games between them (in the sense of game theory); full information in the construction of the individual preferences; rational individuals – transitive preferences; and that interpersonal comparisons are not allowed. Arrow's contribution was critical because, without changing any one of the restrictive assumptions mentioned, he proved, for the general case, that it cannot be shown that private markets optimize social economic welfare. It is however necessary to understand what happens when the restrictive assumptions under which welfare economics was built are relaxed.

We have already seen that allowing interpersonal comparisons gave rise to a positive SCT. In this section we discuss which other results have been obtained by relaxing the other restrictive assumptions. Game theory proves that if individuals are allowed to play games there are multi-equilibriums, many of which are non-Pareto optimal, like the Nash equilibriums. Information theory demonstrates that if we relax the assumption of full information, we find multi-equilibriums which may exhibit unemployment and/or underdevelopment. Behavioral economics has shown that under certain circumstances individuals do not behave rationally, but emotionally, cooperative, and altruistic.

Game Theory

General equilibrium theory had important repercussions for welfare economics[32]. However, it is not possible to demonstrate a unique optimum

[32] The general equilibrium model has been very useful to reinforce some of the approaches to welfare economics and to understand them more precisely. In particular, the two fundamental theorems of welfare economics are derived from the general equilibrium model. The first of these theorems states that the process of assigning a market equilibrium is Pareto efficient (It is said that an allocation of resources is Pareto efficient if there is no possible redistribution that can improve the situation of one person without deteriorating the situation of another).This result, which is very general and does not require any assumption of convexity, is also very important because it emulates mathematically and allows to explain the invisible hand of Adam Smith. This result is the axis of the justification of the importance of the price system as an efficient system of transmission of consumer preferences, a mechanism that, as we have argued, is central to understanding the rise of Western capitalism. But remember our discussion about welfare economics: this result implies a given distribution of resources (and in general a given institutional arrangement),

equilibrium without the use of a set of *strong* assumptions[33]. The relaxation of these strong assumptions leads to imperfect competition models, information models, and game theory models, in which it is possible to find

which is implicit in the prices that manifest themselves in the market. So, the success of the market as a transmitter of information in the West cannot be exported to other cultures without basic considerations about the institutions in those cultures, for example, the presence or not of a middle class, the legal system, the possibility of coalitions, and so on. The real world is characterized by Nash and information multi-equilibriums, and to design an adequate institutional arrangement is a key problem to take into consideration. And in a multi-equilibrium world, the pareto optimality of the first theorem does not hold. Despite the above, this first theorem is not only an impressive result, but one of great importance for the economic science in general.

The second fundamental theorem of welfare economics states that, if an efficient Pareto allocation is found, then it will always correspond to a competitive equilibrium characterized by a defined set of prices and a redistribution of resources. This result implies that any redistribution of goods that one wishes to carry out, can always be done efficiently through the market, through a redistribution of resources. Mathematically, this result requires the assumption of technology and convex preferences. Note that the redistribution of resources cannot only be politically impracticable, but can physically involve the redistribution of human capital, which cannot be done. Despite these impediments, there is an important message in this second theorem, because it implies that if the distribution of income is achieved by, for example, a tax (or benefit) from a single exhibition, then the desired redistribution of welfare can be achieved without sacrificing the efficiency of the market. The theorem has relevant implications. On the one hand, it is a natural defender of the importance of using the market and taking efficiency into account, since it tells us that the market can always be used; on the other hand, it makes it perfectly clear that the market cannot solve equity problems and that these must be addressed directly via the redistribution of income. This message is important in terms of resisting both the temptation to distort efficiency to achieve equity, and the temptation to argue that equity must be sacrificed for the sake of efficiency. In practice, however, the redistributions that would be required do not seem to be politically attractive in many cases, so that considerations are always made between equity and efficiency, and it is not uncommon for non-Pareto solutions to be established.

[33] Walras also made scarcity the essence of value and forged a process by virtue of which by means of "tatonnement" the market moves towards equilibrium. Walras studied the general equilibrium by counting equations and unknowns, and using the Walrasian auctioneer; however, this method does not tell us anything about the existence, uniqueness, or stability of the equilibrium.

In the general equilibrium of Leontief, one can prove the existence and uniqueness of the equilibrium, but not the stability of the primal and dual problem at the same time. In a neoclassical general equilibrium with trials (that is, where there are no inventories or transactions are not executed unless they are correct; so that implicitly there is a Walrasian auctioneer); stability can be proven given certain assumptions, such as the theorem of weak revealed preferences (which implies that the aggregate demand excess function behaves as a function of excess demand of a particular individual) or the substitution assumption among all the goods (this implies that the price increase in a good , keeping all other prices constant, increases the excess demand on all other goods). Stability in neoclassical models without trials, and where there are inventories, requires the introduction of new assumptions about the nature of the exchange system (see, for example, Intrilligator, 1971, chapter 9, and Varian, 1984, chapter 6).

systems with multiple equilibriums of which many are non-optimal, and even explosive situations without solution. Multiple equilibrium models show that the equilibrium obtained depends to a large extent upon the institutions that are assumed. General equilibrium theory explained successfully how the market behavior transmits information from the individual to the society; but it was unsuccessful to prove the existence and stability of a unique Pareto efficient equilibrium.

Nash has shown that there are many equilibriums that are non-Pareto optimal and that nevertheless are stable. Which means that markets do not necessarily optimize, and there are many possible equilibrium outcomes. What defines the final economic equilibrium? In game theory, which is the field in which Nash worked, the settings of the game. This result changes drastically the neoclassical conclusion that given the set of endowments, the technology, and the preferences of many individuals, a unique general economic equilibrium could be obtained. The result that one unique stable equilibrium does not exist is fundamental. It means, for example, that a generation of economists has been taught macroeconomics in a misled way. There is not any theoretical reason to argue, as the school of rational expectations did, that the economy will remain stable at a full employment equilibrium: so, it is not surprising that in the real world it did not, and that we have had the 2008 GFC (Global Financial Crisis) and the 2020 GP (Global Pandemic). The settings of the game in game theory could be conceptualized, to some extent, as corresponding to the information set used in information economics, field in which Nobel prize winner Joseph E. Stiglitz, among others, have shown that there are multi-equilibriums, which may correspond to unemployment or underdevelopment stable equilibriums. Another way in which one could conceptualize the settings in a game is as corresponding with an institutional arrangement.

It was clearly established that the attempt to find one unique stable optimum equilibrium had failed. What are the implications of the failure? Since the setting, whether a game, an information set, or an institutional arrangement, defines partially the final equilibrium to be obtained – the first implication is that the microeconomic foundations of macroeconomics must take the setting in consideration. The second implication is that, even though markets do not achieve one unique optimal stable equilibrium, they do transmit very efficiently the information of individual preferences – which is fundamental for economic growth. It is true that there is no market solution without an institutional arrangement of reference; but it is also true that institutions cannot substitute the markets. Thus, any

macroeconomic policy must be related to three issues: 1) the market's microeconomic efficiency; 2) a proper institutional arrangement – which among other things defines the fiscal and monetary policies; and 3) the institutional economic growth model.

Game theory has shown that there are not only multi-equilibriums, but that many of them are not Pareto optimal – for example, they may be Nash equilibriums. Nine Nobel prize winners have had very relevant contributions in game theory: Harsanyl, Nash and Selten (1994), Aumann and Schelling (2005), Hurwicz, Maskin and Myerson (2007) and Tirole (2014). The main message is that, once the game is set, it defines the conditions under which economic agents operate – basically none of them knowing what the other economic agents will do. And since there are not coordinating agencies, many of the economic decision are not globally optimal – because they are optimizing conditioned upon what economic agent **1** thinks other economic agents **2**,…,**n** will do. Therefore such decisions, in fact, may produce many diverse suboptimal equilibriums.

Notice that even informing the participants that it is possible to achieve a Pareto optimal solution will not help, because the fact of the matter is that they cannot communicate with the other participants to be able to establish a pact of no aggression and/or cooperation to the common goal of reaching the Pareto optimal equilibrium. And even if they can communicate, they need to be able to trust what the other participants said they will do, in many cases, knowing that not complying with the committed behavior will bring extra benefits that can be substantial. Given the game, agent **1** does not know what agents **2**,…,**n** will do; and a movement of agent **1** towards the Pareto equilibrium, may end up putting her/him in a worse position that the one in which he started if agents **2**,…,**n** decide not to cooperate – this can easily be shown in the Prisoners Dilemma.

There is a close relationship, as we mentioned, between the game, the institutional arrangement, the set of information, and the uncertainty as to the future. Both the wrong game, and the improper set of information, can be seen as the equivalent of having the inadequate institutional arrangement. And uncertainty as to the future, may also be seen as the lack of confidence in the institutional arrangement to manage properly future events[34].

Tirole[35] has provided a good example of what occurs in the real world.

[34] See Obregon, C., 2021. *Keynes Today*. Amazon.com- Also available at Research Gate.com

[35] Tirole, J. (1996): "A Theory of Collective Reputations (with Applications to the Persistence of Corruption and to Firm Quality)", *Review of Economic Studies* 63-1, pp. 1-22.

He shows that both a corrupt economy and a non-corrupt economy have stable equilibriums. In a non-corrupt economy, the optimal individual strategy is to be no corrupt; but in a corrupt economy, it is to be corrupt. That is why both equilibriums are stable. Notice that the equilibrium has little to do with the individuals' preferences. Even if we assume that all the individuals in the corrupt economy would rather live in a non-corrupt economy, the corrupt economy will persist if there are not institutional features (including market prices – because markets are an institution) that allow the individuals to act in a non-corrupt manner. This example can be extrapolated to full employment, or to the right development path; almost all, if not all, of the individuals rather have full employment and proper economic development, yet their individual optimal behavior may not take them there. Institutional interventions are required.

Game theory, like NIE, and information economics, focuses on the settings that define the game, and not on the individual characteristics of the economic agents, as neoclassical economics does. Even strong rational agents, in the wrong game, will produce suboptimal equilibriums.

Information Economics

Information economics' success is also evident in the fact that it has produced four Nobel laureates: Mirrless and Vickrey, 1996; and Spence and Stiglitz, 2001[36]. Information economics is a criticism to the vision of neoclassical theorists, according to whom neither the institutions not history mattered. For the neoclassical economists, given the distribution of income, which is assumed not to be a problem to be solved by economic theory, equilibrium is basically defined by the fundamental forces: preferences, technology, and endowments. On the other hand, information theorists argue that information and coordination problems may impose limits on economic possibilities, which are as real as the neoclassical fundamental forces mentioned above.

Information economics focuses on understanding the causes of coordination failures due to which the neoclassical equilibrium is not obtained. This literature shows the possibilities of multiple equilibriums, in which one or several can be Pareto sub-optimal, presenting unemploy-

[36] Akerlof also won in 2001 the Nobel prize due to his contributions in Information Economics; but he had relevant contributions in Behavioral Macroeconomics.

ment and/or underdevelopment; and, nevertheless, the markets, and in general even the existing institutions, may be insufficient to move the economy away from the sub-optimal equilibrium to an optimal neoclassical equilibrium[37]. In addition, the sub-optimal equilibrium can create path dependence[38]. And temporary shocks can have long-term consequences, there is hysteresis[39].

The models used in the study of the information economy are dynamic, either with continuous or discrete decision variables. In some cases, the economic actors are identical; in others, they differ in their benefit functions (payoff); and in others, they differ in their strategy sets.

The inefficiencies of information give rise to a large set of economic externalities, that cannot be resolved through private arrangements, such as: 1) information; 2) group reputation effects; 3) effects of agglomeration; 4) spillovers of knowledge, and 5) pecuniary. The sequence is that there are multiple Pareto equilibriums that can be ranked according to their degree of efficiency; one of these equilibriums is superior to all the others in the sense that it is better for all, but the other inferior equilibriums exist, with their corresponding vector of prices, that do not move the system out of the inferior equilibrium. Information economics has been applied to diverse economic problems, among them, financial crisis[40], unemployment and underdevelopment[41].

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[37] Arnott and Stiglitz, 1991, Kranton, 1996, North, 1994. Arnott, R., Stiglitz, J.E. (1991). "Moral Hazard and Nonmarket Institution: Dysfunctional Crowding Out or Peer Monitoring?", *American Economic Review* 81-1, pp. 179-190. Kranton, R.E. (1996). "Reciprocal Exchange: A Self-Sustaining System", *American Economic Review* 86-4, pp. 830-851. North, D.C. (1994): "Economic Performance Through Time", *American Economic Review* 84, pp. 359-368. Alfred Nobel Memorial Prize, Lecture in Economic Science.

[38] Engerman and Sokoloff, 1997, Hoff, 1994, Mookherjee and Debraj, 1999. Engerman, S.L., y Sokoloff, K.L. (1997): "Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies: A View from Economic Historians of the United States", in Haber, S. (ed.): How Latin America Fell Behind: Essays on the Economic Histories of Brazil and México, 1800-1914, Stanford University Press, Stanford, pp. 260-304. Hoff, K. (1994): "The Second Theorem of the Second Best", Journal of Public Economics 54, pp. 223-242. Mookherjee, D., Debraj, R. (1999): Contractual Structure and Wealth Accumulation, Boston University, inedited manuscript.

[39] Tirole, J. (1996). "A Theory of Collective Reputations (with Applications to the Persistence of Corruption and to Firm Quality)", Review of Economic Studies 63-1, pp. 1-22.

[40] Greenwald, B., Stiglitz, J.E., (2003): Towards a New Paradigm in Monetary Economics. Cambridge University Press. Cambridge.

[41] Hoff, 2000; Hoff and Stiglitz, 2002. Hoff, K. (2000): "Beyond Rosenstein-Rodan: The Modern Theory of Coordination Problems in Development", in Pleskovic, B. (ed.): Proceedings of the XII Annual World Bank Conference on Development Economics, World

There is a very close relationship between an insufficient information set, the inadequate institutional arrangement, and the uncertainty regarding the future. Knight and Keynes had explored the consequences of uncertainty for obtaining economic equilibrium and for the determination of employment levels, but none of these authors managed to properly formalize their thinking. Theorists of underdevelopment argued for a long time that it was due to development traps such as low industrialization, low research, and inappropriate institutions; but they did not formalize their thinking either. The great contribution of information economics is that it formalizes: 1) that the economic equilibrium depends upon the institutional arrangement; and 2) that the growth path of a given economy also depends upon the institutional arrangement. A critical message is that today's market prices and institutions may not deliver neither the desired economic equilibrium, nor the required long term growth path.

Information economics argues that whatever institutional interventions must be done, they must be analyzed in a dynamic path. Information economics proved that even with strong rationality assumptions, markets do not necessarily produce neither full employment nor the desired growth path.

Behavioral Economics

Behavioral economics (BE), alike neoclassical economics, describes social dynamics as starting with the individual agent. But an emotional (non-rational) one; therefore, there are many possible equilibriums.

As we have shown in other works[42], the notion of *humans,* as defined by behavioral economics, cannot explain several empirical realities such as: 1) Why individuals behave selfishly in large markets, even though they display altruistic and cooperative behavior in laboratory settings or small groups, even in monetary transactions. 2) Why individuals can display altruistic and cooperative social behavior in some cases, like the dictator's game in the laboratory setting, or the high social expenditures in developed economies; and not do so in other cases, like the extremely low

Bank, Washington. Hoff, K., Stiglitz, J.E. (2002): "Modern Economic Theory and Development", in Meier, G.M., y Stiglitz, J.E. (eds.): Frontiers of Development Economics. The Future in Perspective, 3a ed., World Bank/Oxford University Press, Washington, pp. 389-485.

[42] Obregon, C. 2018. *Beyond Behavioral Economics: Who is the Economic Man?* Amazon.com. Research gate.com.

international aid granted to poor countries (which is nothing else than a global dictator's game). 3) Why in some cases individuals can display very aggressive behavior, particularly to an *"out-group"* (composed by individuals that do not belong to the individual's *in-group*). 4) Why the companies with larger global success are the ones which introduce new options to the customer, and new ways to process information in a more rational way. 5) Why, despite the individual's presumed non-rationality, markets work so well to allocate resources and to promote economic growth. To explain these realities, we need to go beyond behavioral economics. We need a comprehensive view that we will discuss in chapter three.

Behavioral economics bases its analysis on the characteristics of the nature of the human individual. The whole discussion is around two issues: whether individuals are selfish or not, and whether they are rational or not. But there is not a careful description of the social group, the institutions, and the historical values of the culture of reference. Focusing on the individual to explain social dynamics and economic relations is the wrong methodological approach, which for the free-market defenders ended up in their proposals that economic markets can almost do it all. Behavioral economics rebels against this conclusion. And, maintaining the same methodological approach than the neoclassical school, it ends up with the conclusion: that *humans* display altruistic and cooperative behavior even in monetary transactions. But it could not explain why in some cases they behave altruistic and cooperative, and in others they behave selfishly. And it could not explain in which cases individual selfishness is welcome, and in which ones it is not. And it could not understand the relationship between the individual selfish behavior in large markets, the efficient allocation of resources, and capitalism's fast economic growth. Social dynamics goes well beyond economics. We do need to integrate other social sciences, but we should not, and cannot, do it using only the individualistic methodology; because social dynamics goes well beyond the individuals, we need to describe the institutional arrangement of the group to which the individual belongs.

Introducing psychology allowed behavioral economics to describe a non-rational individual, incapable to know on many occasions his true economic preferences. But then, how do markets work so well to allocate resources and governments do so poorly? Why did the USSR fail, and the Western economies succeeded? These questions cannot be answered with behavioral economics. We need to go beyond, as we will do in chapter three.

Behavioral economics conceived humans as non-rational, which has resulted useful for some specific economic problems, such as: personal savings, organ donation, and many others. However, there is not any given human nature that defines the individual's decisions. Humans are neither by nature aggressive and selfish, nor cooperative and altruistic – what they do and decide is largely defined by the group's institutional arrangement.

Thus, the inescapable conclusion is that the economic equilibrium depends not only on individual preferences, but also upon the institutional arrangement.

CONCLUSION

Welfare economics and general equilibrium theory were developed with the aim to attain three goals: 1) That private markets have an existent, unique, and stable equilibrium; 2) that such equilibrium maximizes social economic welfare; and 3) to develop a price theory to explain economic value. The purpose was to separate efficiency (economic value) from equity (social and political) considerations. Arrow's impossibility theorem, without changing any of the assumptions made by neoclassical economics, showed the impossibility to aggregate a SWF, which for the general case proved that markets do not optimize social economic welfare. Moreover, other schools have shown that some of the assumptions used by neoclassical economists must be relaxed to understand real economies. Information economics has shown that in a real economy, economic agents do not have full information, and NIE (neoinstitutionalism in economics) has shown how institutions are required to establish the information conditions that allow economic trading. Game theory has shown that in real economies it is in the benefit of the economic agents to play games among them. And behavioral economics has shown that in real economies, under certain conditions, economic agents, instead of behaving rational and selfish, behave non-rational, cooperative, and altruistic.

Because of all these previous contributions we end up with a world of multi-equilibriums in which: 1) It is not possible to fully explain the microeconomics interactions between the economic agents only based on the characteristics of the individuals, there is no doubt that the setting in which those interactions occur is highly influential; 2) any attempt to de-

fine the economic equilibrium as a consequence only of the given technology, the individuals' preferences, and the endowments, must conclude in a failure; because the inescapable conclusion is that, besides these factors, the economic equilibrium is also decisively influenced by the institutional arrangement; 3) unemployment and underdevelopment are possible, and 4) Pareto optimality may exist or not; but even if it exists, it still may be a sub-optimal position (in a global sense of several possible Pareto equilibriums) related to unemployment and/or underdevelopment, amongst other economic undesirable conditions.

Therefore, of the three initial neoclassical goals only a price theory stands, and with the caveat that economic value depends not only upon market prices, but also on the dependence of the economic equilibrium on the institutional arrangement.

In the real world, social choices do happen, but they are not exclusively the result of aggregating individual preferences (which for some societies like the Western societies may be a critical factor but not the only one), they are always also consequence of the social institutional arrangement. Institutions not only change the aggregation results of the individuals' preferences, but also influence the individuals' preferences themselves. Therefore, although is true that in the real-world social choices ocurr, and that in many cases they reflect an aggregation of individual preferences (although in many other cases they do not), it is also true that many of these social choices may relate to very suboptimal Pareto equilibriums or even to non-Paretian equilibriums.

It is in this previous context, that SCT must be understood. Social choices in the real world always involve interpersonal comparisons which are an external value judgment due to the social institutional arrangement; and under interpersonal comparisons individual preference aggregation becomes possible. SCT then, in this perspective, becomes a tool to be used for institutional design. From this perspective SCT may be seen as a tool to understand the relationship between individuals' preferences and social choices in specific conditions. SCT, by disclosing the aggregation procedures, contributes to understand them, and opens the possibility of discussing how they could be improved. So, SCT may be seen, from this perspective, as a tool that may be helpful to improve the institutional aggregation methodology.

There are still two critical questions that we have left unanswered at this point, and that will be topics of the next two chapters. The first one is what is the relationship between SCT and Sen's economics dealing with

capabilities, development, and poverty, which will be the topic of the next chapter. The second one is how the results obtained by the distinct schools of economics mentioned in this chapter relate to each other. This will be the topic of the third chapter, in which we will introduce comprehensive institutionalism (CI). CI argues that, if we exclude ideological preconceptions, many of the scientific results of diverse schools are compatible amongst themselves, and that their divergence is explained by their particular focus on solving distinct economic problems.

CHAPTER TWO: SCT AND SEN'S ECONOMICS

To comprehend Sen's economics, one needs to understand what Sen was looking for. Sen studied in Cambridge under the influence of Maurice Dobb and Piero Sraffa, both of which were critical of neoclassical economics. And he was born in India, a country with acute poverty, a rich spiritual humanitarian tradition and solid democratic beliefs inherited from England. He was convinced that Marxism was right in that capitalism was not solving the problems of injustice, and at the same time he was a believer in private freedom and democratic processes. His passion in life was to understand how injustices could be solved through collective choices based on individual freedom. To a large extent he has accomplished his personal goals, and, as a result, has given to the world one of the most interesting social-intellectual constructions of our times. Not only did he get the Nobel prize in economics in 1998, but he has been globally highly influential in the way we look today at the problem of poverty and other key social injustices. However, like with any social thinker, there are limitations to his proposals that is worth understanding. After all, Sen, despite his genius, is only one of the several great thinkers of our times.

In Sen's contributions there is a positive side that cannot be questioned, as it is based on axioms that are correctly proven. But there are also philosophical preconceptions that can be seen more as normative than as descriptive. Sen's economics is a call for social action and individual involvement in the key socio-economic problems of our times, mainly those related to injustices.

Therefore, when discussing Sen's economics, one needs to be aware of the three layers on which he bases his proposals, and of the way they relate to each other. The three planes being: I) The axiomatic plane – a scientific axiomatic analysis of the social interaction between individual values and collective choices. II) The philosophical plane - at the normative level, he introduces several philosophical preconceptions: A) socially responsible, rational individual human beings, who are capable to create, understand and rank, at least partially, social choices, through sharing information and deliberation, and can get to fruitful common agreements;

B) individuals who have the political freedom to participate in the election of social choices; C) individuals who are free to obtain what they value most with their reason; D) individuals able to obtain what they value most through a free process; E) individuals free to act in a private sphere; F) Sen's capability theory, which the author recognizes is only one of the several justice-ethical hyper planes that could be used in SCT for the individuals to discuss the social alternatives - but that he insists, is the correct plane to evaluate social problems. III) The pragmatic plane - his call for concrete actions "now" to solve real social problems through fostering individual deliberation.

As it will be shown, maintaining the analysis of Sen's economics within these three planes allows us to better understand the importance of his contributions, as well as to have a better perspective of the limitations of his proposals.

At the axiomatic plane Sen's key contribution, although there are others, is to show that by allowing interpersonal comparisons Arrow's impossibility results are no longer obtained. At the philosophical plane Sen presupposes socially responsible, individual, free beings, that using their informed reason, and deliberating, can reach partial agreements that can always attain a nearby maximum (as opposed to the optimum search in neoclassical economics). At the pragmatic plane Sen defends that informing the individuals and fostering deliberation we can and should foster actions "now" to contribute to the solution of the nations and the world's most acute social problems.

These three planes are interrelated; planes I, II (except II F), and III are necessary to avoid Arrow's impossibility results.

THE AXIOMATIC PLANE

A careful analysis of Sen's axiomatic solution shows that it is based on an impossible task for any individual to accomplish. Thus, there is not any general axiomatic solution to the problem of social choice. Therefore, we must settle for partial pragmatic solutions, consequence of philosophical preconceptions (such as the presumed existence of partial orderings) and social deliberation, for a subset of socio-economic problems, among which we find some related to injustices that the private markets cannot handle.

There are many axiomatic results worth mentioning. Sen shows that Arrow's theorem can be generalized and would hold even if utilities were cardinal[43]. He shows that "when used along with interpersonal comparisons, cardinality takes us much further (that is, further than comparisons of levels of utilities alone)"[44]. He shows that Arrow's impossibility theorem does not depend on the inconsistency in the preferences of one of the individuals[45]. And he also shows that the SWF does not necessarily have to be transitive. The following quote resumes how Sen departs axiomatically from Arrow:

"Each individual is assumed to have an ordering over the alternative social states, and society is supposed to have an ordering based on the set of individual orderings, as the problem is posed by Arrow. We shall have to depart from this classic framework in some respects. First, for consistent choice it is not needed that the society should have an ordering"[46]. "Second, for some choice problems we do not even need completeness"[47]. "Third, it is arguable that social choice should depend not merely on individual orderings, but on their intensities of preference. Cardinal welfare functions for individuals may be considered"[48]. "Fourth, the question of interpersonal comparisons is itself an interesting one. It can be used even without cardinality[49].

Sen's most critical axiomatic result is that, once interpersonal comparisons are allowed, the impossibility results go away. Thus, a simple way to start discussing Sen's economics is to review again: How do interpersonal comparisons work?

To do it, let us go back to example one in chapter one, and find a solution by allowing interpersonal comparisons. Let us multiply preferences of individual one by 4, of individual two by 2 and of individual three by 1. A simple count, because of the overweight given to individual one, will select the social choice x1. Because the individual one has four votes to

[43] Theorem 8*2 in Sen, 1970a). Sen, A. (1970a): *Collective Choice and Social Welfare,* Elsevier, Amsterdam

[44] Ibid

[45] Theorem 3 in Sen, 1993. Sen, A. (1993): "Internal Consistency of Choice", *Econometrica* 61, pp. 495-521.

[46] Ibid p 47

[47] Ibid. p 48

[48] ibid

[49] Ibid. p 49

select x1, individual two only has two votes to select x2, and individual three only has one vote to select x3. Using a more sophisticated pair-wise voting to build a SWF, we obtain x1px2 - 4 counts, x2px3 - 6 counts, x1px3 4 - counts, x3px1 - 3 counts, x2px1 - 2 counts, x1px2 - 1 count, and x3px2 - 1 count. Therefore, the selected social choice is x2 (notice the solution is different from simple counting); and the SWF is transitive: x2px3; x1px2; x1px3. However, we can change the pair-wise voting x selected, just by modifying the relative weights given to the individuals. To see how, multiply by 4 preferences of individual one, by 1 preferences of individual two, and by 2 preferences of individual three. Now the pair-wise voting social choice selected is x1. And SWF transitivity is maintained: x1px2; x2px3; x1px3m. We can also obtain a pair-wise voting solution where x2 is selected, without social transitivity (the absence of social transitivity is not relevant because of Buchanan's argument that societies are not rational individuals); to obtain it, multiply individuals' one and two preferences by 2, and those of individual three by 1. The result is then: x2px3 - 4 counts; x1px2 - 3 counts; x1px3 – 3 counts; x1px3 – 2 counts; x2px1 – 2 counts; and x3px2 – 1 count. The SWF is x2px3; x3px1; x1px2. And it is not transitive.

The critical point to understand is that, by allowing interpersonal comparisons it is always possible to find a solution to the impossibility theorem; but there are many alternatives to do the interpersonal comparisons, and each one of them may obtain different aggregate results. Therefore, there is not a unique axiomatic solution. Moreover, to define the solution, it is extremely relevant on what bases the interpersonal comparability (even if it is only a partial one) is made. The solution in the axiomatic plane is necessarily related to the philosophical plane. Sen's answers are always partially given in the philosophical plane. He asserts that the decision is made by the enlightened (through public discussion) free rational responsible individuals; and that such, well informed, discussion is what guarantees an acceptable outcome (acceptability meaning "better than now" i.e., obtaining a maximum rather than an optimum). Thus, Sen's economics involves an axiomatic result which is necessarily interrelated with Sen's philosophical preconceptions. The free rational individuals' social judgments, which must be agreed through deliberation, at least in partial orderings, are required to find the solution. The key point in all this is that: interpersonal comparisons work due to the introduction of shared value judgments (the individuals agreeing in the weightings to be used, through deliberation, even if only partially orderings).

Interpersonal comparisons means that we introduce weights for each individual's preferences; and such weights must come from a discussed ethical hyperplane which could have any of several references (or even more than one, as long as contradictory results are not obtained). Examples of such references are classical utilitarianism, the head-count method of poverty measurement (assuming certain minimum poverty is a social goal), Rawls' difference principle, or Sen's capabilities. In sum, the SWF solution enters the realm of social judgments[50].

Let us further analyze technically what the interpersonal comparisons solution entails. We need to ask: Who decides what the social alternatives are? Where do they come from? In welfare economics, before Bergson and Samuelson, the SWF was only a Pareto efficient construction based on the preferences of the n individuals for g goods and s services. But these preferences are "expressed in the markets". Thus, the SWF was only an abstract representation of the preferences expressed by many individuals for many goods and services through real life prices in real microeconomic markets. Now, as Samuelson proved, because the markets' prices depend on the income distribution, there is not a unique solution; and therefore, it cannot be argued that markets optimize the social economic welfare. Then Bergson came along with the SWF including values, and Samuelson endorsed it. This new Bergson-Samuelson SWF included, in addition to goods and services, the distribution of income and other social considerations; as Sen has asserted, it changed from including only purely economic preferences to the inclusion of value considerations. But it must be realized that Bergson-Samuelson's SWF has a huge unresolved problem; because while economic preferences are expressed micro-economically in real markets, for values there are not real markets. Therefore, the question is: How are then values aggregated?

Arrow, to show the impossibility to build the Bergson-Samuelson's SWF, assumes a given X set of social choices, over which the individuals express their preferences. A procedure that was acceptable to show why the Bergson- Samuelson's SWF cannot be obtained. But when Sen comes along and proposes interpersonal comparisons to build once more a Bergson-Samuelson's SWF, the question (because there are no markets for values) becomes: How is the X set constructed? Where does it come from?

The only possible answer in Sen's world, is that individuals through discussion and deliberation must agree on the X set of social alternatives

[50] Personal comparisons may also avoid the impossibility results by changing appropriately the individual preferences, the example we saw in chapter one.

that they would like to consider. Now, once they agree on the X set to be considered, it is assumed that each individual knows well X = xi, where i= 1,…,n social alternatives. In addition, he/she must have enough information about each social alternative to discuss with other individuals its advantages and disadvantages. Moreover, each individual must agree with the other individuals on which one of several ethical hyperplanes should be used for the deliberation to take place and the agreements to be made. Which implies the ability of the individuals to discuss and discriminate amongst these possible ethical hyperplanes. Moreover, each individual must decide the weight that should be given to each one of the n individuals' preferences + values, and must be aware of the resulting implications, of giving each one of the weights, in the overall solution. The tasks given to each individual are so burdensome that a central planner could not accomplishes them. For an individual, it is clearly impossible to accomplish such complex tasks.

It is true that we are at an axiomatic plane; but the point is that the solution it entails is too complex to represent reality. This is why the third, pragmatic plane is required. Sen's position is that, even if only partial solutions are obtained, and only partial orderings are possible, enlightened discussion between rational individuals should be able to move us from "worse" social states to "better" ones. This pragmatism, however, while relevant for certain social problems may not be so for others.

Before we enter below into the discussion of the philosophical and the pragmatic planes, it must be stressed that the efficiency of the markets to transmit and aggregate information cannot be reproduced by a central planner, let alone by an individual. Markets do not optimize social welfare because they are constrained by several factors: they depend on the income distribution, they do not consider social values, and they exclude individuals which are incapable to participate properly due to other accumulated inequalities. But markets, despite their several limitations, cannot be reproduced by a central planner, let alone by any individual in the society. The aggregation of all the individuals' preferences in the plane of economic goods and services is impossible to be done by a central planner. The tasks required from each individual to be able to build the Bergson-Samuelson's SWF, in the preferences + values plane, is even more complex than the task that the central planner cannot do in the restricted plane of preferences related to goods and services.

Moreover, simply by assuming that the preferences + values of the individual i depend upon the social choice finally selected, we can see that

it will be a continuous dynamic feedback process that may either lead to a final solution or may explode[51].

The construction of a Bergson-Samuelson's SWF is axiomatically an impossible task. Thus, we must conform ourselves with partial pragmatic solutions based upon philosophical preconceptions, that may be relevant for specific cases. However, given the limitations of the markets to deal with key injustice problems, SCT and Sen's economics may be an important aid in approaching these types of problems. More on this discussion below.

Summary of the Axiomatic Plane. A positive SCT cannot be based on axiomatic results. Once interpersonal comparisons are allowed, the process of the decisions which every individual must make is too complex to represent reality. In the real world, not even a central planner will be able to make the complex tasks that a positive SCT demands from each individual. Moreover, even under the highly unrealistic assumption that those complex tasks could be performed by each individual, the question of the dynamic stability of the social choice remains unresolved. Therefore, the axiomatic solution does not provide a general solution. Partial solutions could be obtained to specific social problems, but they require philosophical preconceptions (such as presumed rational, socially responsible individuals, and the existence of partial orderings on which they can agree through deliberation) and pragmatism. SCT, as a positive technique, works better in small groups, in which the individuals are aware of the problem at hand and of its potential solutions; like, for example, small communities, a parliament, or a university board.

THE PHILOSOPHICAL PLANE

As the following quote shows, the role of reasoning is critical in Sen's economics

"The role of reasoning in social choice is the principal subject of this book. Social choice theory can be seen as the pursuit of critical reasoning in dealing with group decisions, including aggregative assessment of the lives of people who constitute a group...We need disciplined reasoning in the pursuit of social ethics and in the evaluation of claims about social justice, as with other problems of social choice"[52].

[51] The corresponding differential equation may not have a solution and explode.

[52] Ibid. p 453

Therefore, a good introduction to Sen's philosophical thought is his definition of rationality. For him, rationality is the discipline consisting of subjecting personal decisions and actions, as well as individual goals, values, and priorities, to the scrutiny of reason.

Sen analyzes the following definitions of rationality based on various theories of personal choice (Rational Choice Theory, RCT), as well as various views of the person and the difference between sympathy and commitment. He asserts that the traditional view of rational economic man includes: RCT1+RCT2+RCT3+VISIONS 1, 2 and 3
Where:
RCT1= behavior is the consequence of maximizing.
RCT2= the maximand is personal interest.
RCT3= personal interest is selfish and do not consider other persons or the fairness of the process.
VISION 1= Person centered only in his personal well-being.
VISION 2 = The only goal of the person is to maximize his/her personal well-being.
VISION 3= Personal choices are only guided by the mentioned goal.

He points out that some traditional economists have sought to include benevolence in egoism, so Gary Becker, for example, rejects RCT3 and VIEW 1. In this modified traditional view, the feeling of sympathy can be incorporated, since basically this feeling is a rejection of RCT3 and VISION 1. However, Sen insists that the key to understanding the rationality of the ethical human is commitment, and this is established based on reason, which establishes the scrutiny not only of actions, but also of objectives, values, and priorities. Sen's ethical human is capable of commitment, and this rejects VISION 2 and VISION 3, since commitment can change the person's goal and can make their choices focus on goals other than their own. Sen's ethical human has a social relationship with others, and not just a purely economic relationship, so VIEW 1 is rejected. Sen's ethical human denies RCT3 and RCT2, since he/she is a social being who does not have to maximize only his/her personal interest.

As for RCT1, Sen accepts it, but with some important considerations, which are the following: 1) the preferences may be incomplete and not necessarily ordered; 2) these preferences do not necessarily have internal consistency mechanically, so that the weak and strong axioms of revealed preferences do not have to hold and are meaningless; according to Sen, the axioms for the maximization of behavior must be related to the substantive objectives to be maximized in such a way that it satis-

fies the scrutiny of reason; 3) the information may be incomplete; Sen mentions the importance of results based on asymmetric information; 4) maximization is part of rationality, but it is not everything. The reason not only scrutinizes the optimization methods, but also the objectives to be optimized and the values related to them; 5) behavior may not be the consequence of a maximization process, but of values that establish broad or totally defining restrictions on the objectives to be established; 6) behavior may be influenced by the past[53]; 7) the unit of agency may not be the individual but the group, so that individual behavior may obey group actions, and 8) the individual is not only concerned with the objectives or results, but also with the processes to be used in pursuit of these goals. In this way, for Sen, maximization explains only part of the behavior since reason intervenes not only in maximizing but also in defining objectives and scrutinizing values. As discussed above, any maximization process is subject to very important restrictions, but once these are considered, the maximization process continues to be relevant.

Sen wonders what the use of rationality is, and answers that the fundamental use is that it allows us to act wisely and judiciously. It has a normative role. Rationality can be used to explain the behavior of others; but should not be based on the narrow concept of RCT, which assumes that others are always optimizing their self-interest. Sen finds the use of a *homo economicus* via RCT unjustified in economics, social choice, politics, and legal matters, and even in conflict and defense, and he claims that we must abandon the concept of *homo economicus* and its restricted rationality. Instead, he defends, the rationality of the ethical human is useful to explain how to arrive at social decisions.

The rationality of the ethical human, according to Sen, has the following limitations: 1) There is no sure known test to discriminate between rational behavior and non-rational behavior. The rationality of the ethical human cannot be easily expressed in consistent algorithms, such as the theory of revealed preferences. However, for Sen this limitation is simply a recognition of the complexity of the use of reason itself; 2) it depends on the person's own reasoning process, and on a permanent need to scrutinize with reason. Therefore, we have both the problems of corresponding irrational inconsistency (inconsistency between what is reflected and what

[53] He quotes (Kanger, 1970, 1980). Kanger, S. (1970): "New Foundations for Ethical Theory", in Hil-pinen, R. (ed.): *Deontic Logic: Introductory and Systematic Readings,* Reidel, Dordrecht, pp. 36-58. Previous version: *New Foundations for Ethical Theory,* part 1, Stockholm, 1957. Kanger, S., y Ohman, S. (eds.) (1980): *Philosophy and Grammar,* Reidel, Dordrecht.

is done), and reflective inconsistency (does not reflect adequately due to lack of training or intellectual capacity). But, despite its limitations, the personal freedom to reason is for Sen an important virtue; and it is consistent with the vision of a socially responsible human capable of exercising intelligible social reasoning. The type of human conceived, according to Sen, by Kant, Smith, and Rawls (note that in Kant and Smith the moral rationality of humans comes from their ability to understand God's moral laws with their individual reason). Social reasoning in Sen goes beyond purely ethical abstract judgments, it defines individuals' behavior. The ethical human is not carried away by his instincts, he follows his/her moral reason, but he/she is constantly in the process of scrutinizing it.

Sen makes a comment on Darwin's theory of evolution. For Sen, the Darwinian theories of evolution are not in contradiction with the vision of the ethical rational man. Darwin's evolutionism focuses on the characteristics of living beings and has nothing to say about the quality of life of humans and other animals, which depends on an external world that we can adjust to, as well as to evaluate our priorities according to reason and live in accordance with them. Regarding quality of life, there are many remediable deprivations in the world such as poverty, famines, epidemics, and others. Evolutionary processes can influence our rules of conduct and our psychological preferences about actions, but they do not invade the space of reflexive reason, so that the rational human still must scrutinize with reason his goals, values, and actions not only in relation to himself, but also in relationship to others.

Sen recognizes that values vary in different societies with different institutional arrangements, and that they change over time. In addition, he admits that the individual's social orientation cannot be taken for granted. For Sen, rationality analysis can learn much from the extensive institutional literature, which shows the influences that operate on the possibility and effectiveness of interdependent actions and the associated organizational possibilities[54]. However, he asserts that, this is not a sufficient argument to eliminate the need for reason to scrutinize more general values with a social orientation, as proposed, according to him, by Kant, Smith, and Rawls.

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[54] Williamson, 1985; North, 1990; Ostrom, 1990; Blaug, 1978. Williamson, O.E. (1985): *The Economic Institutions of Capitalism,* Free Press, New York. North, D.C. (1990): *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, London/Cambridge University Press, Cambridge, 2004. Ostrom, E. (1990): *Governing the Commons: The Evolution of Institutions for Collective Action,* Cambridge University Press, Cambridge. Blaug, M. (1978): *Economic Theory in Retrospect,* 3a ed., Cambridge University Press, Cambridge

In his article on markets and freedoms[55], Sen sets out to reassess the market mechanism in terms of its contributions and limitations to promoting individual freedoms. He begins by discussing utilitarian efficiency (welfarism) and reviewing Pareto's two theorems of general equilibrium. For Sen, the first theorem is a great contribution, since by establishing that the competitive equilibrium of the market is Pareto efficient it gives us a solid result in relation to what efficiency means, even though it is necessary to remember that this efficiency depends on a given distribution of income. On the other hand, for this author the second theorem is of little practical relevance because, if for political or legal reasons we cannot rearrange the distribution of income freely, then this second theorem does not help us at all.

Sen introduces the two concepts of freedom that he considers relevant. The first concept of freedom is related to the opportunity to obtain, and focuses on measuring what is obtained. This freedom is the concern of utilitarianism or welfarism[56]. Sen notes that the introduction of uncertainty in the context of welfarism is for instrumental purposes only[57]; The basic consequence of the introduction of uncertainty is that the possession of options acquires a value, but ultimately it is about measuring what you get. From the point of view of welfarism, the importance of the market lies in the fact that it promotes efficiency, that is, it allows Pareto efficient results to be obtained. Welfarism is not concerned with the process.

The second concept of freedom is related to the process followed to obtain; this concept is unrelated to the quality of the result obtained. This freedom is the concern of libertarianism[58], which accepts as an exception disregarding the outcome only in the case of "catastrophic moral errors."

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[55] Sen, A., 2002. *Rationality and Freedom,* Belknap Press/Harvard University Press, Cambridge/London. P.501

[56] Samuelson, 1947; Hicks, 1939; Buchanan, 1986. Samuelson, P. (1947): *Foundations of Economic Analysis,* Harvard University Press, Cambridge, 1983. Hicks, J. (1939): *Value and Capital,* 2a ed.: Clarendon Press, Oxford, 1946. *Valor y capital,* Fondo de Cultura Económica, México, 1977. Buchanan, J.M. (1986): *Liberty, Market, and the State,* Wheatsheaf Books, Brighton.

[57] Koopmans, 1964; Kreps, 1979, 1988. Koopmans T. (1964): "Economic Growth at a Maximal Rate", *Quarterly Journal of Economics* 78-3, pp. 355-394. Kreps, D.M. (1979): "A Representation Theorem for Preference for Flexibility", *Econometrica* 47-3, pp. 565577. Kreps, D.M. (1988): *Notes on the Theory of Choice,* Westview Press, Boulder.

[58] Hayek, 1960; Nozick, 1974. Hayek, F.A. (1960): *The Constitution of Liberty,* University of Chicago Press, Chicago. Nozick, R. (1974): *Anarchy, State, and Utopia,* Basic Books, New York.

Sen notes that the use of game theory [59] also has only instrumental ends for the libertarianism; The consequence of the introduction of game theory is that the understanding of the consequences of different freedoms in terms of processes is enriched. But game theory (like libertarianism) does not care about the quality of the result obtained. From the point of view of libertarianism, the market is convenient since, it provides the individual with an area of freedom immune to the interference of others and protects his autonomy.

Sen believes that the market must be evaluated simultaneously in the two mentioned concepts of freedom. From the point of view of the process, the market is well evaluated by Sen since it provides the individual with autonomy and a sphere of freedom immune to others (in the absence of externalities). But that the market is satisfactory from the point of view of the process is insufficient to recommend it, since the results are also important (example: free markets can generate famines). From the point of view of the results, to evaluate the market Sen says that it is necessary to ask ourselves with what criteria and in what space to evaluate what is obtained.

From the point of view of the criterion by which to evaluate, the answer is that personal reasonableness is the criterion used, so that any axiom for evaluating freedom of opportunity must be a weak axiom, since it is subject to both the reality of the individual differences about what is reasonable, as well as to the fact that individual preferences may be incomplete. Sen proposes the following weak axiom:

Weak efficiency of opportunity freedom. A state of affairs is efficiently weak if there is no possible alternative state in which everyone's opportunity freedom is surely not worsened while at least one person's opportunity freedom can be expanded.

Note that, with this criterion, Sen replaces Pareto's first general equilibrium theorem. The replacement becomes necessary because the preferences in Sen come from his ethical human and not from the *homo economicus*

[59] Gardenfors, 1981; Sugden, 1981, 1985; Gaertner, Pattanaik, and Suzumura, 1992. Pattanaik, 1989, 1991; Suzumura, 1991. Gardenfors, P. (1981): "Rights, Games and Social Choice", *Nous* 15, pp. 341-356. Sugden, R. (1981): *The Political Economy of Public Choice,* Martin Robertson, Oxford. Sugden, R. (1985): "Liberty, Preference and Choice", *Economics and Philosophy* 1, pp. 213-229. Gaertner, W., Pattanaik, P.K., y Suzumura, K. (1992): "Individual Rights Revisited", *Economica* 59, pp. 161-177. Pattanaik, P.K. (1989): *A Conceptual Assessment of Sen's Formulation of Rights,* mimeo, Birmingham University. Pattanaik, P.K. (1991): *Welfarism, Individual Rights and Game Forms,* mimeo, University of California, Riverside. Suzumura, K. (1991): "Alternative Approaches to Libertarian Rights", in Arrow, K.J. (ed.): *Markets and Welfare,* Mac-Millan, London.

characteristic of the general equilibrium. Here a very important question arises, to which we will return later, but which is important to state now: Who is the human who acts in the markets? There are two possible answers. The first answer is Sen's: the ethical human, who is the one who acts socially and is also the one who acts in the markets. The second answer is Smith's: the *homo economicus* acts in the markets and the ethical human in other social issues. For Smith, maintaining this dichotomy is extremely important. Because the *homo economicus´* preferences are the ones linked to the expansion of the market, the technological development, and the fast economic growth of capitalism. Sen disregards the importance of the dichotomy, and consequently, as we will discuss below, he ends up without an explanation of what produces the fast economic growth of the West.

Regarding the space in which to judge the market, that is, what to obtain, Sen argues that the appropriate space is not that of possession of goods and services, but rather that of the opportunities that the individual must obtain – based on what the individual has reason to value. To understand how the market is seen in the space proposed by Sen, it is convenient to note the following: 1) in welfarism, Pareto's first theorem establishes that the preferences of all individuals are satisfied: they come from the ordered preferences of the *homo economicus*; 2) in welfarism, preferences are expressed in a goods and services space; 3) in Sen, the preferences (values) are weakly satisfied by the new axiom mentioned in the previous paragraph; 4) in Sen, preferences (values) come from the ethical human, are incomplete and are subject to personal rationality. These weakly satisfied preferences could also be expressed in the goods space, but Sen proposes a new space (his ethical proposal); 5) Sen proposes to express these weakly satisfied preferences in the space of the individual capabilities to satisfy what the individual has reason to value.

Once criteria and space are introduced, we can value the market in terms of freedom of opportunity. The market in Sen is not Pareto efficient, as in welfarism, but weakly efficient according to the new proposed axiom. Market efficiency in Sen is measured in capabilities, versus goods in welfarism. The market in Sen, as in welfarism, is incapable of solving problems of equity because it is limited by the distribution of income from which it comes. The inequities that occur in the income space are accentuated in the capabilities space, due to inequalities in the ability to use income to satisfy the needs that one has reason to value.

In addition to the standard problems of the traditional literature, such as achieving equilibrium, guaranteeing competition, absence of non-mar-

ket externalities, etc., the basic challenge of the market is its inability to solve the problem of distributing substantial freedoms equitably. Sen argues that his approach serves to deemphasize the freedom related to economic efficiency characteristic of welfarism, and orient us toward freedom in general to obtain, moving us from a purely technical world to a world of political and ethical importance.

He argues that, to measure efficiency, it is unnecessary to assume a compartmentalized *homo economicus*. Because even if we allow the ethical human to operate in the markets and maximize values that do not only satisfy his personal interest; it is still possible, given the characteristics of the newly defined market, to measure its efficiency in the newly defined space.

Sen introduces the liberal paradox (also called the impossibility of the Paretian liberal). The liberal paradox is given by a problem of conflict of principles and, therefore, cannot be resolved through interpersonal comparisons. The problem is what principle to use to evaluate the result. The solution must be given in the field of deliberation and in a way that increases information in relation to what is lost and gained by adopting one principle or the other. In other words, there is no single solution, but what is lost and gained in each case can be presented to society. The liberal paradox implies the possibility that social choices are not Pareto optimal. And the solution is through deliberation and reason. The following quotes from Sen define the role of the liberal paradox and its potential solution:

"The informational widening considered so far has been mainly concerned with the use of interpersonal comparisons. But this need not be the only form of broadening that can enhance the possibility of informed social choice…Liberty has many different aspects, including two rather distinct features: (1) the opportunity aspect: we should be able to achieve what we choose to achieve in our respective personal domains, for example, in our private life; and (2) the process aspect: we can make our own choices in our personal domains (no matter whether we achieve what we want)"[60].

"The theorem shows the impossibility of satisfying even a very mild demand for 'minimal liberty' when combined with an insistence on Pareto efficiency[61]theorem, this impossibility theorem does not depend on the independence of irrelevant alternatives (condition I), which is not invoked. Instead, it is shown that unrestricted domain (U) and the Pa-

[60] Sen, A., 2018., op. cit. P 34

[61] Ibid. p 35

reto principle (P) cannot be combined with 'minimal liberty', demanding only that at least two persons are each decisive over the choice over one pair – with their difference being 'personal' to the respective person… The theorem shows the impossibility of satisfying even a very mild demand for 'minimal liberty' when combined with an insistence on Pareto efficiency…A satisfactory resolution of this impossibility must include taking an evaluative view of the acceptable priorities between personal liberty, on one side, and the pull of immediate pleasures and desires on the other. There is no escape from reasoned scrutiny in the pursuit of a satisfactory resolution of these diverse attractions"[62].

There are several problems with Sen's philosophical preconceptions. The first problem is that contemporary neurobiology and psychology do not support Sen's vision of a rational, socially responsible, ethical individual. Recent discoveries in neurobiology and contemporary psychology have shown that individuals in their interaction with the environment are guided by their emotions, which preselect the external cues that the human mind stores as images (neuronal circuits). And it is in these emotionally based, neuronal circuits that the human reason operates. That means that human minds only know emotionally biased images, based on information captured through the human senses. The human mind can never get to know the external reality as it is. Consequently, there is a biological distinction between the "ingroup" with which we are bounded emotionally, and the "outgroup" with which we are not. A culture implies a conceptual system and an institutional arrangement that grew out of small, emotionally bonded groups, that were finding ways to live together in larger groups through a mutual language and a common institutional life. But any conceptual system is culturally bounded, and individuals are biased towards those nearer to them. Individuals are in fact socially responsible because they are social beings, and they do have the capacity to process information rationally, but they are always biased by their emotions, and are only socially responsible in relation to the ingroup. In other works, I have explored and documented the three belonging ways that individuals have; love, which is the belonging relation to those near to them; social significance, which is the social relation to the social group defined as the "ingroup"; and existential significance, which is the belonging relation to the biological and physical universe. The judgmental bias of the individual (due to his/her emotions and the ties to the ingroup, whether it is the family, close friends, or members of

[62] Ibid. p 439.

a larger ingroup) has been largely documented in neurobiology, contemporary cognitive psychology, and social psychology. Therefore, ethical values are not universal, simply because neurobiologically speaking the human mind does not have access to any external universal truths. Nor even aided by science do human beings have access to universal truths. Scientific models interact fruitfully with reality, but they are mathematical and conceptual models of such a reality, and in fact more than one model may work to interact with reality, even though their conceptual internal structure may be very different. Newton's and Einstein's conception of time are very different, for the first, time is absolute, and for the latter, it is a geometric dimension; yet, both conceptions work well in the explanation of 95% of the macro-physical events[63]. Since not the mind alone, nor aided by science, have access to universal truths, ethical rational judgments are group and culturally bounded, and there may or not be common partial orderings for social preferences + values between individuals (with diverse belongings), social groups or cultures.

The second problem with Sen's philosophical preconceptions, which is related to the first problem discussed in the previous paragraph, is that individual freedom is not a universal value. Today only 13% of the population lives in liberal democracies. Therefore, Sen's preconception of the necessity of the "free individual" is not applicable to most of the human population. Freedom in other cultures is more related to the freedom to be than to the three freedoms pointed out by Sen: freedom to decide between social alternatives, the freedom to obtain, and the freedom to obtain it through a free process What is the freedom to be? It is related to be what the true essential nature of humans is preconceived to be. In Christianity, human beings are free when they realize their true essential nature as children of God. In the Islam and in Protestantism, the individuals become free by obeying God's will. In Marxism, individuals are only free when they realize their true nature as "species being" in the communist humane society. In Hinduism, individuals are free when they illuminate themselves through the Buddhist meditation. In Confucianism, individuals are free when they obey their social nature by being socially responsible. Social discussion happens in all these cases among individuals, but not "free individuals" in Sen's sense. The individual freedom that it is pursued in all these other cases is very different from the one that Sen presupposes as universal. Sen's freedoms correspond to the contemporary Western society, and to the societies which are under Western

[63] Penrose, r. (2005), *The Road to Reality,* Alfred a. Knopf, new york.

influence; but they are not an accepted universal value. As I have shown in other works the Occidental differentiation of individualism, in which Sen bases his proposals, is only one of the several routes of differentiation taken by human societies. We also have the Chinese- northern Asian route, the Hindu- southern Asian route, the Muslim route, and the hybrid routes of Latin America and Africa. The "free individual", in Sen's sense, is a value of the West that is not universally shared. This already limits the universality of Sen's proposals. In a world in which 87% of the population lives in political regimes which are not liberal democracies, it is just impossible to solve global problems with a methodology based on the isolated rational individual "freely" evaluating global social choices, as Sen proposes.

The third problem with Sen's philosophical preconceptions, is that Sen loses sight of the importance of the dichotomy in Smith's writings between the *homo economicus* and the ethical individual. In the *Theory of Moral Sentiments* Smith classifies an activity as ethical if it passes a dual judgment. The individual must judge that by doing the action in question he/she does not damage the society. And the society must agree. The *Wealth of Nations* was the inquiry into how economic growth ocurrs, and Smith concludes that it is due to the economic freedoms of private property, free production, and free trade, which enlarge the market size, fostering technological development and fast economic growth. Because economic growth is beneficial for the society, it is therefore an ethical activity. And Smith concludes then that individual selfishness must be allowed in the economic markets. Sen brings the ethical human being to the markets and loses sight of the importance of economic growth. It could be argued that, after all, Sen measures development as freedom and not as economic growth, but of course there are limits to Sen's vision of development. The country that has explained most of the global reduction in poverty is China, which does not enjoy the freedoms proposed by Sen. While it is true that markets do not solve the problems of justice, it is also true that fast economic growth greatly improves the quality of human life along many dimensions – for example, drastically reducing infant mortality. Thus, just like it is improper using the selfish neoclassical human to solve problems of justice, it is also inappropriate to bring Sen's ethical human to the markets.

A fourth problem, related to the previous ones, is that Sen loses sight of the relevance of institutions for social choices. There is not a given human nature. As social psychology has shown, whether an individual be-

haves rational and ethical as in Sen, or irrational (emotional), cooperative and altruistic as in behavioral economics, or selfish and rational like in neoclassical economics, depends upon the institutional arrangement. The individual behavior is largely defined by the institutional settings. And even though it is true that individuals become cognitively differentiated, and that given their unique cognitive history they respond differently to the same external stimulus, it is also true that their cognitive history is largely defined by the quality of their belonging. Individuals do have the capacity to reason and to evaluate alternatives as Sen suggests, it is in fact an evolutionary requirement; but their judgments are always emotionally biased towards those in the ingroup with which they have emotional belonging ties. Therefore, the same individual may be socially responsible, cooperative, and altruistic to members of his/her ingroup, and selfish and aggressive to members of the outgroup. Social choices are not taken by socially responsible, rational individuals in a vacuum, individuals live within an institutional arrangement which already preconditions what choices the individual takes, moreover many social choices are decided by institutions. Institutions are what provides stability to the social choices and make it possible for the individual to live in a world with social order and continuity.

Smith's contribution was to propose that the institution of private markets in which the individual is allowed to behave selfish were critical for the social well-being of the society, because it promoted economic growth. The role of the market as a transmitter of the changing needs of a rapidly expanding middle class was undoubtedly a pillar of Western economic growth. Sen's view of the market centered on Pareto's first theorem obscures and hinders the understanding of the true importance of the market; which derives not only from its Pareto efficiency, but basically from the fact that it transmits information efficiently and allows economic growth.

To the extent that a society becomes bureaucratized, and the sectors not linked to the market expand, economic dynamism is lost. Sen is right when he affirms that, with a bad distribution of income and well-being, the market is a bad transmitter of information, but the solution is not to leave the market aside and create a parallel bureaucratized economy —this was the way of the communist countries, and it turned out to be a great failure. The long-term solution is economic growth (which in addition to the market requires an institutional arrangement that fosters economic growth), coupled with income and well-being distribution and

poverty policies (for which Sen's economics is relevant). Understanding the historical institutional arrangement, how it preconditions human behavior, and how social change can be promoted both out of individual choices and out of institutional choices is critical. For social change to endure it must be institutionalized. Ignoring the institutions in the process of social choice is one of the great limitations of Sen's work.

A fifth problem with Sen's philosophical preconceptions, is the use of the impartial spectator to argue that social choices must be related to global problems. He argues that the use of reason as the basis of social choices follows the tradition, among others, of Kant, Smith, and Rawls. Rawls in his most recent writings argues that justice is not universal, but based on culturally bounded values, see chapter seven. And in Kant and Smith the universality of ethical judgments does in fact exist, and it comes from the "impartial spectator" a term used by Smith; but the impartial spectator in Smith is God. And God is also what provides the universality of the Kantian ethical judgments. What is important to realize is that without a God, based only in scientific evidence there is not such universality. The idea that we are all children of God is a Christian idea, belonging to the particular social differentiation of the history of the West. And even in the West it has been more a normative guide than an actual historical reality, which has been dominated by the selfish interests of the nation states. As we mentioned, international aid to underdeveloped countries is only 0.2% of global GDP, almost nothing. Clearly in practice we are not all children of God, as poor African children dying at few years of live, because of a lack of food and medicine, without anyone helping, witness. Precisely the global problems are related to the lack of a common institutional arrangement, which is one of the most pressing social choices of today. And the lack of an acceptable common global conceptual system cannot be solved by assuming globally responsible social individuals as Sen does. Because if they were so, we would not be where we are, and the African children would not be dying. Normative desires are welcome. But it is not true that the lack of information and deliberation explains why rich countries do not help more the poor African children, used in here as an example. The reason is that they do not care, because these children belong to the outgroup. And until common institutions, and a common conceptual system, brings these poor African children into the ingroup, they will not receive enough help.

Sen is right, institutional change will take a long time, and there is no damage in provoking public discussion and individual awareness; in fact,

it will marginally help. But real changes will imply fundamental institutional transformations that will not happen because hypothetical social choices are based upon presumed "free individuals" that do not exist in 87% of the population. Creating individual consciousness helps, but it is critical to involve the global leaders. And we need to convince everybody, that incorporating the poor countries into the global economy is in the benefit of all the world's citizens, because it will stimulate global economic growth. It is not out of rational benevolence that the problem of global poverty will be solved, but because of fast economic growth in the poor countries. The critical social choice related to poverty in the last thirty years was China's decision to enter the capitalist trade. China alone explains most of the global reduction in poverty. And it was a social choice taken by the Chinese leaders. Income and well-being distribution programs and poverty elimination programs are very helpful, and they must be continued; but to be successful they must be paralleled with an adequate program of economic growth. Otherwise, the distributional and poverty elimination benefits would get reversed because of the lack of adequate economic growth. Institutions and economic growth are two critical axis of social choice that are missing in Sen's economics.

Summary of the Philosophical Plane. Sen's philosophical preconceptions do not have scientific basis. There are assumptions introduced by him, which however have resulted very valuable in providing a different, new perspective to analyze, evaluate, and solve certain socio-economic problems like poverty, distribution of well-being, gender inequality, comparative deprivation, and economic underdevelopment

THE PRAGMATIC PLANE

Sen recognizes that only partial orderings may be obtained, and therefore only partial agreements will be achieved. But he asserts that there is always a route for improvement, that we must forget about a social optimum, and we should do something today to improve the world in which we live; there is a clear sense of pragmatism as the following quotes show:

"There is much to be done well before any grand institutional breakthrough emerges. The reach of social choice theory goes well beyond the hope of wonderful global governance – and even of perfect national administrations (nice as they are as ambitions and inspirations). Social choice

reasoning addresses people in their diverse roles in the world, as dreamers as well as critics, and ultimately as agents of scrutiny and of change"[64].

"Finally, it is worth emphasizing that while 'pure' systems of collective choice tend to be more appealing for theoretical studies of social decisions, they are often not the most useful systems to study. With this in view, this book has been much concerned with 'impurities' of one kind or another, e.g., partial interpersonal comparability, partial cardinality, restricted domains, intransitive social indifference, incomplete social preference, and so on."[65].

"It may also be noted that a valuational incompleteness need not entail a valuational impasse[66]… What I am arguing for here is the need to recognize that the existence of unranked pairs is an actual – and may even be a common – outcome of reasoned analysis of ethical and political evaluation[67].

SCT as conceived by Sen is a positive theory of disciplined, reasoned choice, guided to be pragmatically helpful in solving real world issues, through the democratic participation and deliberation of individuals. Sen has elaborated a SCT that does not pretend an elegant general solution, but pragmatic solutions to specific real problems that include: the need for interpersonal comparisons of well-being – including partial comparability, incomplete rankings, the use of maximal as opposed to optimum choice, the recognition of rights -including human rights, the importance of human freedom and capabilities, and the critical role of public reasoning. He defends that SCT is applicable not only to well-defined groups like a parliament, or an academy of sciences. But also to a nation, and the resolution of the global problems[68].

Sen points out that the construction of a social choice space is characterized by possibilities and impossibilities that coexist close to each other. Interpersonal comparisons can be made in most cases, but not for all cases (like in the case of the liberal paradox). However, Sen's thesis is that, in any case, rational individuals who consider all states of nature, and all feasible conflicts, can arrive at possible solution spaces. Sen insists that even partial interpersonal comparisons can lead to relevant solu-

[64] Sen, A., 2018., op. cit. pp. 467-468.

[65] Ibid. pp. 264 -265.

[66] Ibid. p 457

[67] Ibid. p 458.

[68] Sen, A., 2018, op. cit. concluding remarks.

tions. The social conflict is not eliminated and persists, but this does not prevent the existence of important possible spaces for solutions[69].

In what follows we will discuss Sen's solution proposals for key socio-economic problems. In all the cases the main limitans of Sen's economics is whether his philosophical preconceptions are reasonable to study the socio-economic problem under analysis. Sen's critical preconception is the existence of socially responsible, free rational individuals who, once they are well informed and public deliberation has taken place, are capable to discern social choices. At the global level, with the absence of a global democracy, and with 87% of the world's population living in non-liberal democracies, the independence of the individuals as the axis of social choice is violated in global problems. Global choices are decided by global leaders, under the influence of institutions and groups from the civil society. Moreover, as discussed before, even if the independent, socially responsible, rational individuals existed at the global level, it would be impossible for an axiomatic result to be found, because no individual could manage the complexity of the information required. Thus, Sen's economics' contributions for global problems must be limited to his philosophical influence on the national policy makers, the leaders of global institutions, and the institutions of the civil society. Moreover, it is true that there is space for stimulating small groups' and individuals' discussion in global issues; but this is hardly a specific contribution of Sen's economics. However, it could be argued that SCT axiomatic results could be used as a tool that may be helpful in formalizing some of these discussions. In which global problems have Sen's philosophical preconceptions had significant influence? Poverty, distribution of well-being, comparative deprivation, gender inequality, and economic development.

At the level of national problems in liberal democracies, the number of individuals in a nation is too large, and therefore, a general axiomatic solution cannot be found; therefore, Sen's economic key contributions are limited to his influence on national leaders and key civil society institutions. Sen's philosophical influence at the national level is in the same topics that at the international level. However, for specific problems in small communities, within the nation, the existence of the independent free rational individual is a good assumption; and SCT may be used as a tool to formalize groups' and individuals' deliberations.

In discussing Sen's economics' influence there are three relevant possibilities: 1) The use of the three planes of Sen's economics: the axiomatic,

[69] Sen, A., 2002., op. cit. p. 81.

the philosophical and the pragmatic; 2) the use of only two planes: the philosophical and the pragmatic; and 3) the use of only the SCT axiomatic results to formalize the discussion in small groups, which could be done at diverse ethical hyperplanes (Sen's being only one of the possibilities).

TABLE 2.1 SUMMARIZES THE THREE ALTERNATIVES FOR KEY SOCIOECONOMIC PROBLEMS.

	SCT and Sen's Economics Areas of Influence						
	Area of influence			Planes			SCT as a Tool
	Small	National	Global	Axiomatic	Philosophica	Pragmatic	
Problem							
Small Communities	x			x	x	x	
Cost-Benefit	x			x	x	x	
Environmental Evaluation	x			x	x	x	
Poverty	x	x	x		x	x	
Well Being Distribution	x	x	x		x	x	
Gender Inequality	x	x	x		x	x	
Comparative Deprivation	x	x	x		x	x	
Economic Development	x	x	x		x	x	
Cost Benefit		x	x		x		x
Environmental Evaluation		x	x				x
Other Global Problems							x
Group Discussion							x
Economic Growth							
Institutional Arrangement							

In what follows we will discuss each one of the socioeconomic problems mentioned in table 2.1. We will leave Sen's theory of economic development and his capability theory to the end.

A) Poverty. In an income space, poverty can be defined as people below a certain income level. However, if we evaluate this phenomenon in Sen's space of freedom, we will focus on other information such as: 1) relative deprivation; 2) the social climate, for example violence or epidemiological factors; 3) diversities of the environment; 4) personal heterogeneities, diseases, etc. Famines, for example, occur with sufficient food supply but are the consequence of a rapid drop in the income of part of the population. In democratic systems, famines do not tend to occur, while they do in authoritarian systems.

It is important to note that Sen's contribution is not really consequence of the application of SCT, but to a change of plane to analyze the situation. What is proposed by Sen is not informing the individuals and letting them decide, for example, whether deprivation is acceptable or not. His conclusion follows directly from his own philosophical preconceptions. Sen assumes that all the individuals would reason (if they were informed and educated) that they would not like to be deprived. And from this perspective not to be deprived is an individual human right. A human right that, for example, utilitarianism or certain communist philosophies would not rank as high; because for them, there are certain individual sacrifices that may be acceptable for the common good. There is no doubt that Sen has changed the way communities, nations, and the world at large look at poverty. But it is important to understand that his contribution comes from his philosophical preconceptions and his pragmatism, and not from his SCT.

The following quote from Sen is important to understand how he creates his proposals:

"While preferences one way or another are clearly relevant to interpersonal comparisons, it is hard to deny that in practice (for example, in providing social security, or in pursuing redistributive policies) various conventional rules of thumb are used to make such comparisons, without waiting for the endorsement of these rules in articulate expressions of individual preferences. To some degree this procedure simply involves guessing what the preferences and values are, without actually asking people to express them"[70].

This paragraph clearly reveals that Sen is comfortable suggesting that, to solve social problems, "the reasonable" should be imposed by the analyst. This imposition is due, in many cases, to the impossibility to truly apply a collective social choice as suggested by SCT. The problem of global poverty certainly would not by resolved by axiomatic SCT, thus Sen uses his pragmatism and his philosophical preconceptions. Now, this does not demerit at all his contributions in this area, but certainly limit their reach. Sen's main limitation of course is convincing the rich to give significant aid to the poor at the global level. Global poverty would not be resolved by international benevolence, it requires policies of economic growth based on the mutual interest of creating new economic markets.

b) Well-being Distribution. As in poverty, Sen has changed how the world looks at distributional issues. He has shown that not only income

[70] Sen, A., 2002, op. cit. p. 309.

is relevant, but also the distribution of capabilities. Again, his pragmatic contribution comes from his philosophical preconceptions.

c) Gender inequality and comparative deprivation. Sen's thesis is that relative deprivation and extreme poverty are often manifested in conformist attitudes, so that it is difficult to appreciate the consequences of deprivation. But if we establish a criterion of reasonableness and look for the appropriate objective indicators based on the space of freedom, we find them. Studies that focus on this direction have shown an inequality between the sexes characterized by female malnutrition, poor health, and excessive morbidity. The change of focus, like in the case of poverty, is due to the introduction of Sen's philosophical preconceptions. And it has given fruitful pragmatic results as to the way to see and to understand this problem.

d) Cost-benefit Analysis. Sen defends that contingent cost-benefit evaluation attempts to create artificial markets based on what individuals would be willing to pay if these or other conditions were met. But that even when in some cases, in these models, the majority is not willing to pay, the social consequences for a few (a minority) can be disastrous. Therefore, he suggests that in these cases, it is necessary to present the problem to the citizens with enriched information (create an informed majority about the implications for the minority) about the possible states of nature, establish individual evaluations of the alternatives, and create rules and principles on how to relate the evaluations.

It must be observed however, that while SCT may be useful, its use is limited to cases in which the population can truly be informed and have the educational capability to understand and participate, that is, for example, small communities. At the national and at the global levels axiomatic SCT solutions cannot be found. Therefore, Sen's economic influence is restricted to his philosophical argument of the minorities rights which is useful, but is not necessarily a new contribution.

e) Environmental Evaluation. Sen discusses global overwarming; he mentions that models based on average production and living standards do not consider environmental warming to be a problem. However, he says one of the consequences of climate change is that the frequency of localized disasters increases, with the consequence of loss of life due to storms and floods. Therefore, he argues, the economic cost is not high, but the social cost is. He defends that it is necessary that the informed citizen, and not the *homo economicus,* establishes the social choice.

This is a clear example of Sen arguing that SCT can do what it cannot. There is no such a global citizen, and there are no citizens deciding in a world in which only 13% of the population lives in liberal democracies. The truth is that SCT has nothing to add to the solution of this problem. The problem must be addressed by leaders of the nations of the world, under the influence of scientists and civil institutions. SCT could only be used as a tool for small group discussions on this issue. There are no specific philosophical preconceptions of Sen that give new light in this problem, and no major pragmatic solution has been obtained under Sen's influence.

In small communities however, environmental evaluation is possible with Sen's economics using the three planes mentioned earlier.

d) Underdevelopment.

Sen transports the Western individual to other societies, and he disregards the need to incorporate an institutional-cultural analysis of the specific characteristics and social evolution of different societies. Sen is totally explicit in his rational universalism of the notion of freedom:

"It will not have escaped the reader that this book is informed by the belief in the ability of different people from different cultures to share common values and agree on some common compromises. In fact, the predominant value of freedom as the organizing principle of this work has the characteristic of a strong universalist assumption"[71].

For Sen, freedom is not only the way to measure development (the evaluative reason), but it is also the cause of economic development (the effective reason). This author affirms that development should not be measured in terms of product per capita, but through the capabilities that the individual must satisfy (what the individual considers necessary according to his/her reason). But note that Sen already presupposes what is necessary for any individual, since he deduces it rationally; so that the individual, all individuals, must agree with Sen. And with what, according to Sen, all individuals must consider of value. Sen responds with his five basic freedoms: 1) political freedoms (freedom of speech and choice); 2) economic facilities (opportunity to participate in trade and production); 3) social opportunities (education and health); 4) guarantees of transparency, and 5) protection and security. For Sen, one form of freedom reinforces the other and thus development is generated, which is measured in the freedoms themselves.

Sen points out that, even when there is a correlation between poverty and the inability to exercise the beforementioned freedoms, there

[71] Sen, A. (2000): *Development as Freedom,* Anchor Books, New York. p. 244.

are cases in which the relationship is not close enough and, therefore, it is better to focus on the deprivation of basic capabilities. Sen uses several examples: 1) he points out that the Chinese (males) and the Indians of the Kerala region (males and females) live longer lives than African Americans; 2) he favorably compares India with China, since in the former there have been no famines, while in the latter between 1958 and 1961 thirty million people died due to famines.

Sen asserts that poverty is a fundamental cause of deprivation of basic capabilities. However, he says, poverty is not the same for everyone: for example, women suffer direct discrimination that gives them excessive morbidity in many regions.

As for the market, as we have already mentioned, Sen argues that economic participation via the market is itself a form of freedom, regardless of the efficiency effects of the market.

Sen defends that there is a false dichotomy between fighting poverty and fighting for the establishment of political freedoms; for him, one thing reinforces the other. Sen highlights three virtues in democracy: a) it has an intrinsic importance; b) it has instrumental contributions (example: prevents famines), and c) it acquires a positive role in the creation of values and norms.

Improving people's capabilities, Sen points out, has positive effects on development; for example, if we improve women's well-being, we find that women's education and participation are positively correlated not only with child survival but also with a drop in the fertility rate. Once again, Sen mentions that under democracy (Kerala) it is possible to obtain reductions in the fertility rate as aggressively as under autocracy (China), and without the negative effects that authoritarianism entails, such as higher infant mortality among women and excessive increase in abortions.

For Sen, human rights and basic freedoms have a universal character due to three conditions: a) their intrinsic importance; b) their consequential role in providing economic security, and c) their positive role in the genesis of values and priorities. This author notices a confusion between what people really want (everyone wants basic freedoms) and what leaders argue that people want. Although cultural differences are important, Sen believes that they have been exaggerated in oversimplified generalizations of Asian values, Western civilization, African cultures, and so on. Each of these generalizations represents enormous cultural and historical diversity and, in this context, none of these broad categories contradicts

the desires of individuals to exercise the basic freedoms proposed by Sen (a Rawlsian heritage). Despite the skepticism of some, Sen argues that the idea of reasoned social progress is an old idea, proposed by Aristotle, and that it is still valid.

Sen notes that improvements in life expectancy in Britain are not due to increases in per capita income, but rather to the need to socially share resources during the war and to sharp increases in public spending on social services, such as nutrition and health. Thus, Sen argues that social goals should be pursued on their own, independently of the GDP per capita target.

According to Sen, the counterpart of freedom is responsibility (his ethical-integral man), and the possibility of justice, and the latter is an important factor in evaluating economic and social changes. This author concludes that the formation of human capital should not be seen only as a means of generating economic growth, but as an end by itself.

Sen's first great contribution is that his work represents a great challenge to the traditional vision of neoclassical development thinking, according to which it is enough to establish the appropriate relative prices and economic openness to achieve economic development. Sen forces us to rethink how to measure development, and shows that the traditional way of measuring it, just as economic growth, is not enough. In this sense, Sen's work is a critique not only of the neoclassicists, but of the entire economic literature on development. This author manages to bring the plane of discussion and reflection to the philosophical level, and this is already a great contribution, since it forces us to see development as a human problem. In the end it is clear, after Sen's contribution, that we cannot speak of development without referring to values and objectives related to the human being himself. Poverty has dimensions that go beyond the per capita income received.

Sen's second major contribution is that development has concrete goals that can be measured and specifically pursued, and that are not directly correlated with per capita income. Thus, Sen succeeded in changing the United Nations and World Bank measurement of development with the introduction of human development indices and multidimensional poverty indices. It is indisputable that Sen is right when he argues that the social welfare of the West is not only explained by the success of capitalism but, fundamentally, by the forces of social cohesion that emerge from democracy (his example: Great Britain). And he is right in arguing that at the international level we cannot expect capitalism by itself to solve prob-

lems of social equity. Sen has made it clear that there is much to be done in specific social directions, and that we cannot expect capitalist globalization to solve the problems of the human dimensions of development.

Because of these two previous contributions, Sen's work is of great relevance not only as a critique of the previous development thinking, but also as a bold proposal as to what to do to directly address the human dimension of development.

However, Sen's proposals emerge, as we have pointed out, from his philosophical rationalistic presuppositions, which have the following consequences and limitations: 1) They universalize philosophical principles, and leaves divergence in the history of cultures without a dimension of its own. Sen manages to be assertive in his proposals at the cost of being ahistorical. 2) Regarding his proposal to the West as to what to do, Sen's approach is valid insofar as it universalizes Western's values. But it has serious undesired consequences, because it obscures the differences between the West and other cultures; and therefore, assumes that other cultures necessarily accept Western values as universal. 3) Sen's rationalism appeals to a rationality that is far from being the key to the history of human relations. If there were reasonable social consensus, as Rawls and Sen assume, it would be difficult to explain, for example, the two world wars of the last century, or the actual Russian-Ukraine war. Capitalist relations at the international level are not based on reasonableness, or compassion, but on interests. The consequence is that Sen's appeal for the West to help the poor in underdeveloped countries has had extremely limited consequences. 4) Sen's development economics is a normative proposal for humanitarian aid, for a society that preserves and defends basic human capabilities, but it is not a theory of development. There is not an elaborate proposal in Sen as to how the establishment of basic freedoms leads to economic development.

Sen limits himself to giving some examples such as the ability of democracies to avoid famines or the importance of education and participation of women in reducing the fertility rate and the positive consequences of the above for development. However, Sen's economics is far from being a theory of development. Sen's five basic freedoms, listed above, cannot explain development and are unable to explain, for example:

a) Why in the 1990's a democratic and capitalist Russia was a failure, versus the communist authoritarian China that was a success.
b) Why the growth of authoritarian Asia was much higher than that of democratic Latin America.

c) Why communist countries were more successful than many capitalists' ones in basic freedoms (3) and (5) but failed in (1), (2) and (4).

d) Why in Latin America the countries with more freedoms in dimensions (1), (3), (4) and (5), like Argentina, did not achieve the economic development implied by (2), while other countries, like Mexico or Brazil, achieved (2) without qualifying well in (1), (3), (4) and (5).

e) Why in Asia countries that in the 1960's scored higher on (3), such as the Philippines, did not achieve development, while countries that scored lower, such as Korea, did.

f) Why countries like Singapore, which scored poorly on (1), were so successful in scoring very well in (2), (3), and (5).

The counterexamples are too numerous, so that not only did Sen not build a theory of development out of his basic freedoms, but in fact it seems impossible to build one even if one wanted to.

One of the weakest connections in Sen's argument is the one he makes between political freedoms and other freedoms. Sen, for example, argues that the differences between Asia and Latin America are due to historical reasons, and therefore Asia has greater freedoms in (2), (3) and (5) despite having less in (1)[72]. Specific counterexamples are as follows:

a) Within Asia there are great differences: education in the Philippines was better in the 1960's than in Korea (at the beginning of the Korean take-off); however, the Philippines has not achieved a better performance than Latin America like Korea did.

b) Within Latin America, Cuba has achieved greater freedoms in (3) and (5) compared to most Latin American countries, and yet its performance in (2) has been particularly poor.

c) Social and economic freedoms in Asia (except Japan) were in 1950 lower than those of Latin America: 40 years of life expectancy at birth versus 50, and a per capita income of 635 dollars (constant 1990) versus 2,554. However, from 1950 to 1998 per capita income in Asia grew annually 3.24%, significantly more than that of Latin America, which grew only 1.72%, and life expectancy at birth from 1950 to 1999 rose in Asia by 26 years versus only 18 years in Latin America[73].

But also, the other Sen's economics connections are weak. There is no way to correlate Sen's basic freedoms with a theory of economic and

[72] Sen, A., 2000., op. cit.

[73] Obregon, C., 2008. Teorias Del Desarrollo Economico. Amazon.com. Also available at Research Gate.com

social development. As we have already seen, countries without (1), such as the Asian ones, achieved development and today have good grades in (2), (3) and (5). Countries without (1), and with good marks in (3) and (5), did not achieve (2) like the communist countries. Countries with (1), and good scores on (3) and (5), such as Argentina, did not achieve (2). Countries without (1), and poor scores on (3) and (5), in relative terms achieved (2) much better than Argentina, such as Mexico and Brazil. In short, none of the basic freedoms seems sufficient to explain economic development (2), and it seems that (2) can occur without (1) and in countries that initially scored poorly in relative terms in (3) and (5).

Clearly, economic development can take place under very different political and social conditions. Social welfare policies in some cases, like the example of Great Britain used by Sen, have generated economic development, but they did not in other cases, like in the communist countries. Democracy may or may not be associated with development: Argentina versus Mexico, Asia versus Latin America. Greater education may or may not bring about development: Philippines versus Korea, Argentina versus Brazil, Russia versus China. Sen's problem, like that of many other development theorists, is that he seeks to associate economic and social development with the image of Western development. The outcome is the elevation of Western values to universal values via rationalism and, consequently the mistaken assumption that if Western values are adapted economic development will be achieved. Furthermore, Sen's broad development is obtained tautologically since it is measured in terms of the same scale of Western values that has previously been adopted as universal. But the reality of economic development resists being simplified based on the adoption of the historical patterns of the West. Countries that have tried it, such as those in Latin America and in the communist economies in transition, have encountered serious problems. While other countries, such as a group of successful Asian countries, and in particular China, have found alternative routes.

In the end, the problem with Sen's rationalism of seeing development as freedom is that it misses the basic characteristic of freedom: "the freedom to define freedom, and the freedom to learn to be free." The successful economic development experienced in the West is an incontrovertible historical reality, but Western history is not the history of the humankind. Globalization, given Western economic dominance, has involved the export of Western's values and its germination in other cultures, resulting in new social and economic conformations; but the complexity of such process cannot be summed up in a universal abstract

rational category that reflects the values and institutions of the West: it is necessary to face the complexity itself.

It is true, as Sen argues, that in the modern world the "threat to native cultures in today's globalized world is largely inescapable"[74]. And it is also true, as Sen argues, that "this is a point of some seriousness, but it is the role of society to determine if anything it wants to preserve from the old ways of living, possibly at a high economic cost"[75]. What is not true is that the mechanism for society to decide should be the implementation of Sen's basic freedoms. That is, even Sen's basic freedoms must be subject to a social choice, which is much broader and goes well beyond Sen's SCT. Being free must include the possibility of defining what it means to be free[76]. Sen underestimates the enormous intrusion that it means for many traditional societies to adopt the basic freedoms that he proposes, particularly democracy. Asking an indigenous community, or a traditional society, to undo all previous social relations and sacrifice them to a voting process (or to an individualistic SCT's approach) in which everyone has equal access to the vote (or equal participation), can destroy the bases of the institutional arrangement of the society in question.

It is not in the interest of the West to accelerate the social processes of other societies inappropriately, nor to demand individual freedoms at all costs in these other societies. The destructive force of Sen's idealism for historically given social institutions of other societies, can only be understood by the West if we ask ourselves the following questions: Why not establish a world democracy? Why not vote individually to choose a world president? Why not accept that the vote of a black from Africa, or an Indian from Peru, has the same value, and should have the same influence over the decisions of the world as a vote of a North American or European citizen? The immediate response of a (typical) Western thinker would be that global democracy in such terms would be unthinkable today since it would destroy the very basis of the global relations of the Western culture with the rest of the world. But if we accept this explanation, which is an obvious component of Western values, how can we at the same time argue that the solution for other societies is the destruction of their institutions through the unrelenting implantation of Western values and an individual based SCT and democratic processes.

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[74] Sen, A 2000., op. cit. p. 240

[75] Ibid, page 241.

[76] Obregon, C., 2008., op. cit. chapter 3.

Even if we were to accept that the implantation of democracy in other societies is the objective to be sought by the West, how can we expect democracy to be successfully implanted at the local level in other societies without the specific support of local historical institutions. How can the West efficiently foster local democracy in other cultures if the West's relationship with those cultures is first and foremost based on short-term capitalist interests. The success of capitalism, not restricted by an appropriate global institutional arrangement, makes it difficult for the West to promote the establishment of democracies in other cultures. A West that defies the international courts, and is oppose to the establishment of international justice, does not have the global credibility to be able export its own value system.

Sen defines the notion of freedom as Western freedom, without making a detailed analysis of the meaning of that concept in different societies. But the individual-society relationship characteristic of Western society is not a historical generality but, on the contrary, it is an exclusive relationship of the West, and relevant only for a certain historical period[77].

The western free individual, imagined by Sartre and by Sen, does not exist in other cultures, nor did it exist in the West in earlier historical periods. A theory of development, as Sen argues, is inevitably linked to a notion of freedom, but this must be analyzed in a historical and cultural perspective. Sen, for example, cites Marx, when this author refers favorably to capitalism freedom versus pre-capitalist unfreedom[78]. But in Marx capitalism is analyzed within a dynamic theory of history under which individual freedom finds different meanings at different points in history. In contrast, for Sen, Western capitalist freedom becomes a rationalist and immovable truth. In Marx rationalism was also present as he uses the rational analysis of history's dynamics to reach his conclusion that at the end of human prehistory, in the communist humane society, humans would finally be truly free realizing their true nature as species being.

Sen does the same thing as Marx, except that. 1) He makes humans "truly free" in capitalism, and 2) he does not produce a historical theory of freedom. Both the rationalisms of Marx and Sen are unacceptable. One must agree with Marx in the need for a dynamic theory of the historical individual-society relationship that allows us to analyze some changing characteristics of that relationship, but without accepting Marx's rationalist preconception that we know the unavoidable fate of such relation-

[77] Obregon C, 2008., op. cit.

[78] Sen, A., 2000., op. cit. p. 29.

ship[79]. For Sen there is no history: the individual human is essentially free. Sen's rationalism makes Western human freedom the aspiration of all cultures, regardless of their historical differences.

It is true that humans can use their reason, but it is not true that they can reach immovable universal truths. It is true that there is room for reasonableness and for the scientific study of social problems, but it is not true that what is reasonable determines social relations. It is true that there is room for Sen's economics, both at the international and local levels, to illuminate different socio-economic problems; but it is not true that social choices should be made solely by the participation of "free" individuals, and it is still even less true that individuals in all cultures do always aspire to have Sen's inalienable freedoms.

Despite the facts that: 1) Sen's capability theory is derived from two core normative rational claims: a) that freedom to achieve well-being is of primary importance and b) that freedom to achieve well-being must be understood in terms of peoples' capabilities, and 2) that there is not in Sen a theory of economic development; there is a critical contribution in Sen's economics. Sen's economics has shown that economic growth does not naturally generates human economic development; thus, whatever the rights and benefits that society wishes to grant the individual (which does not necessarily have to coincide with Sen's capabilities), it is necessary to create institutions and social policies to ensure that the individual receives those "capabilities" that society wishes to grant him/her. It is worth pointing that this contribution derives from Sen's philosophical preconception and his pragmatism and has no relation with Sen's SCT.

CONCLUSION

Sen's economics is a fascinating intellectual construction, there is no doubt that he is one of the intellectual giants of our times. Sen's aim has always been to find practical solutions for the injustice in the world. He uses economics, logic, mathematics, philosophy, and ethics amongst other disciplines to create a new vision of the social world with the purpose of creating new basis for problems like poverty, well-being distribution, underdevelopment, and many others economic and ethical issues. He has been successful nor only as an intellectual receiving the Nobel prize

[79] Obregon, C., 2008., op. cit. chapter 4.

in economics in 1998; but also, has had significant social influence in the way today the United Nations and many countries focus these problems. But his contributions have limitations that must be understood.

Markets - in the neoclassical sense - are only an institution that correspond to the Western societies. An institution in which individuals interact with each other based in their selfish interest. Economic rights of private property and free trade and production of economic goods and services are granted by the society and correspond to a specific historical institutional arrangement. General equilibrium theory and welfare economics were based in the individualism characteristic of the Western markets, but any conclusion obtained through this individualistic methodology is necessarily restricted to such markets. Welfare economics was from the beginning a misleading attempt to show through a deductive model that markets optimize socio-economic welfare; it was doom to failure from the beginning because markets already imply a given well-being distribution (which includes the income distribution, and deprivation issues). Socio-economic welfare necessarily implies value judgments that go beyond the individualism of the markets. These value judgments are social values which are not constructed bottom up from an individualistic approach. Human beings from the beginning started in a group of hominids that already had a conceptual system (which we know, for example, for documented burials) and an institutional arrangement that define their pragmatic social life. Thus, individuals are born in a social group. Social values always have had a social component. Individualism, by leaving institutions out, is the wrong approach for understanding social value building.

An individualistic approach is acceptable as an efficiency quest only related to the markets (although even in here: markets, as neoinstitutionalism in economics (NIE) has shown, require an institutional arrangement to operate). The building of the social welfare function in traditional microeconomics to add the individual preferences in goods and services, was an abstract representation of what happens in real economic markets, in which through prices the individual preferences are aggregated in a very efficient way. But as said before, this social welfare function does not optimize the social-economic welfare, because it is restricted to the given well-being distribution. And this problem does not have a solution.

Bergson constructed a SWF based in preferences + values, that include nor only traditional preferences over goods and services (as they are expressed in real markets) but also social individual values (as for

example the desired social well-being distribution); and this SWF was revalidated by Samuelson. But this Bergson-Samuelson SWF cannot be built. There are no real markets for values, and there is not known social method to aggregate such preferences + values. Arrow came with an abstraction to show the impossibility to build the Bergson-Samuelson SWF. Arrow's abstraction included the known set of social possible states over which individuals will express their preferences + values. Up to here, the story ended where it should: an individualistic approach cannot build social values. But then Sen comes along and allows interpersonal comparisons, cardinal measures, and introduces a rational socially responsible individual capable to understand, accept, and defend what is good for the society, and the Bergson-Samuelson SWF emerges again through a positive Sen's SCT. Sen however started already from the wrong methodological approach. Because Sen's is a purely deductive exercise, like the neoclassical, not based in any scientific evidence about the human nature; and in addition, unlike the neoclassical, is not any longer related to real markets. Thus, Sen's becomes a pure deductive abstract methodology that assumes an individual that must process an enormous amount of information. Individuals in Sen's abstraction must discuss an agreed in how to construct the set of social alternatives, the ethical hyperplane to discuss and establish agreements, the weights given to each individual to make interpersonal comparisons, the cardinal measure use, and if seen in dynamics they must interact in a continuous fashion until a unique, existent, stable solution is found. It is just an impossible task for any individual. There is no way to build social values this way. Institutions must be included to understand how social values are built. There is no axiomatic solution which can be built from individuals' preferences + values to obtain a Bergson-Samuelson SWF.

Sen's SCT however, remains an interesting tool with applicability in small groups capable to organize the discussion and understand the assumptions that must be made to reach a conclusion (assuming the group has agreed to base its decisions on aggregated individual choices). Moreover, Sen's economics goes beyond Sen's positive SCT. Sen's philosophical preconceptions have resulted very powerful to see through new lenses important social problems like poverty, well-being distribution, comparative deprivation, gender inequality, and underdevelopment. And Sen's pragmatism has actively promoted institutional reforms that particularly in certain areas have had an enormous influence: such as the millennial goals of the United Nations, the human development index, the measur-

ing of multidimensional poverty and so on. Today in many countries in the world poverty statistics and analysis is done differently due to Sen's capability theory. This has been a great contribution.

In the following chapter we will discuss social choice and comprehensive institutionalism (CI). CI argues that economics must be based in a broad view of the individual -society relation that must be understood with the aid of other sciences like evolutionary biology, neurobiology, cognitive psychology, social psychology, anthropology, linguistics, and other social sciences. When we enter the scientific knowledge accumulated in these diverse disciplines, it becomes clear that any deductive description as to the nature of humans is inadequate. Humans are neither selfish like the neoclassicals assume, nor emotional, altruistic, and cooperative as behavioral economics argues, nor rational and socially responsible as Sen deductively presupposes. Humans interact very differently in distinct institutional arrangements. Individuals are social beings and any attempt to discuss social values must start with the discussion nor only of individuals preferences + values but also of social conceptual systems and institutional arrangements.

Sen's economics, like neoclassical economics, starts from a deductive individualistic approach, which is a partial and insufficient methodology to understand how human values are formed. Social choices go well beyond Sen's SCT. They involve social institutional arrangements and their corresponding conceptual systems., Moreover social choices may not only involve the economic system (as neoclassical economics do), or the economic system and the integrative system (as Sen does), but also may involve the power system[80]. Sen, by leaving institutions out, rests the stability of the social system only in the moral quality of the individuals which must agree in common values (if only partially). In the real world there are not always possible solutions in the integrative (moral) system, many times the power system is required as the Russian- Ukraine war shows. Moreover, all three systems – the economic, the integrative and the power, must be understood as social systems that are not only based on individual preferences + values but also in historical social institutional arrangements and their corresponding conceptual systems.

The importance of institutions in social choices can easily be seen from an abstract exercise. In his 1996 article, Tirole distinguishes between a non-corrupt society and a corrupt one and argues that they are

[80] Obregon, C., 2022. *Conflict and Resolution*. Amazon.com. Also available at Research Gate.com

both stable equilibriums[81]. Now if we were to do an exercise of SCT (abstracting from the reality that it cannot be done), and we assume that it is found that everyone in the corrupt society prefers a non-corrupt society How do we get to a non-corrupt society? Ad hoc Institutions are required, or the individuals despite their preferences + values will remain in the non-desired equilibrium of the corrupt social system. But ad hoc institutions cannot be created overnight. Choices are taken in a social context that involves historical institutions. Sen can obtain social stability from his rationalism, because in his world of ethical individuals it is possible to achieve social order through information and deliberation. But if we eliminate Sen's rationality (for which there is not scientific support), we end up with the scientific proven fact that individuals behave differently in distinct institutional arrangements.

Social order requires institutions, and social choices always involved them. In a democracy for example, democratic rules, balance of powers, a free civil society, free press, free academia and so forth are key historical institution required. Institutions are a key element missing in Sen's economics. Just thing for example in the following question: Is it desirable that the decision of pushing the nuclear button in the US be a SCT's decision aggregating individuals' preferences + values individuals (assuming the exercise could be done)? (Remember Brexit failure). A key question in social choices is the institutional design, and there are not clear easy answers. But it is far from obvious, that SCT, even if it could be done, is up to the task for certain key social choices to be taken. In the case of the example of the nuclear button, today in the US the institution of the executive power takes the decision (which nor only involves the president but also his key expert advisers).

As we have seen, there are several serious limitations to use the SCT's individualistic approach. One of these critical limitations, is that individuals do behave different in diverse institutional settings. Thus, analyzing and studying institutional design is a must. Empirically we know that in large markets individuals behave in general selfish, while in certain economic circumstances, as shown by behavioral economics they behave emotional, altruistic, and cooperative. The reason of this disparity is the institutional arrangement. Within an economic system institutional arrangement, the individuals behave selfish; while within an integrative system institutional arrangement, they behave altruistic and cooperative.

[81] Tirole, J. (1996): "A Theory of Collective Reputations (with Applications to the Persistence of Corruption and to Firm Quality)", *Review of Economic Studies* 63-1, pp. 122.

The distinction between the ingroup and the outgroup is critical, the lack of a common integrative system means that the individual relate to others outside of his/her integrative system selfish and rational. This explains why social expenditures over GDP are 25% in advanced liberal democracies and social international aid is only 0.2 % of global GDP. The individualist approach is incapable to explain why the individuals display distinct behaviors, because of the lack of the reference of the institutional arrangement. Institutions are a critical element of social choices.

There are only two ways in which individual preferences + values can be conceptualized as the outcome of a common ethics (even if it is only partial). Either individuals have access to external common universal values that they understand and are willing to obey (even if they are only partial orderings) – which as we have discussed before is neurobiologically impossible; or these common values are the consequence of a common institutional arrangement which, as in Veblen, is the outcome of a long historical cultural process – in which case partial orderings are not always guaranteed, and the ingroup-outgroup distinction becomes highly relevant (as it has been scientifically proven). Thus, if we strip out Sen's economics of its rational idealism (which is not scientifically justifiable), there remains only way out to obtain social order – a specific institutional arrangement. And therefore, partial orderings are not always guaranteed, there may not always be a solution through the integrative system, and the power system may get involved to establish social order[82].

Sen's rational ethical individual rests in two assumptions which are evolutionarily questionable: 1) That humans have rational access to universal moral truths, and 2) than they are willing to behave according to them. His notion of partial orderings in the *Theory of Justice* is an attempt to diminish the heavy burden that these assumptions put on Sen's social theory; but it is unsuccessful because, if the two previously mentioned assumptions are gone, nothing guarantees the partial orderings. And then both Sen's solution to the SWF and his theory of justice do not longer have the general validity that Sen argues. The only scientific way out is to understand social morality as the consequence of an institutional arrangement, in which case there are diverse economic equilibriums (social orders) for diverse institutional arrangements. And there is potential conflict between distinct institutional arrangements and their corresponding conceptual systems that may be needed to be solved in occasions through the power system.

[82] Obregon, C., 2022. *The Economics of Global Peace*. Amazon.com. Also available at Research gate.com

In addition to institutions, the other critical element missing in Sen's economics is an explanation of the causes of economic growth. Economics is about economic growth, social well being, well-being distribution and poverty. Sen discusses the last three, but an explanation of where economic growth comes from is missing in Sen's economics. A proper economic growth program, however, turns out to be critical for the sucees of any program attempting to increase social well-being, to achieve a better social well-being distribution, or to eliminate poverty[83].

Further discussion along the lines mentioned in this conclusion, will be presented in the next chapter.

[83] Obregon, C., 2020. *Three Lessons from Economists That Policy Makers Should Never Forget*. Amazon.com. Also available at Research gate.com

CHAPTER THREE: SCT AND NEOINSTITUTIONALISM

This chapter and the next argue that social choices are not only the outcome of aggregating individuals' preferences and values; but are critically related to institutions. Thus, SCT as presented by Sen lacks the critical analysis of the influence of institutions in the final determination of the social choice. Including institutions in the definition of social choices does not rest importance to the individual agent's participation in social choices, but delimits the way in which such participation influences, or should influence, the social choices. If one reviews some of the critical social choices of recent times the role of institutions is undeniable and has been highly critical, for example:

1) The reduction in global poverty and the improvement in the global income distribution is mainly due to China's economic growth, which is due to a social institutional choice taken by Chinese leaders to adopt an Asian growth model that integrate their exports to the West's ICTR. The Asian growth model is based in a very different institutional design than the one recommended by the neoclassical economists based in open markets and small governments[84].
2) The Russian and Latin American leaders choose to follow the neoclassical model in the 1990's and failed[85].
3) Japan's failed economic growth after 1990, despite its early success with the Asian growth model, is due to its leaders' decision to continue competing with national production (with high salaries) instead of exporting capital to produce in low salary countries. Thus, its low growth is because it did not integrate itself properly in the ICTR[86].
4) Korea success is due to their leaders' early decision to adopt the Asian growth model, and after 1990 they integrate properly into the ICTR (while Japan reduce its rate of savings after

[84] Obregon, C., 2018. *Globalization Misguided Views*. Amazon.com. Also available at Research gate.com

[85] Ibid.

[86] Ibid.

1990, Korea maintain it very high)[87].

5) Brexit failure is not due as Sen argues to the lack of proper public information, but to the improper use of a social choice individualistic framework to take a decision that should of have been taken by democratic representatives under the advice of experts.

6) The 2008 GFC was due to the wrong decision by the leaders of the Federal Reserve and the global financial institutions[88].

7) Both the 2008 GFC and the 2020 GP show the importance of proper institutional choices taken by the leaders of the governments[89].

Institutions reflect a long cultural historical development which defines a framework under which individual's preferences and values are expressed. We cannot have an adequate theory of social choice without full understanding of the role of institutions, which does not mean that the role of individuals is not relevant in social choices. But which individuals and how they participate in the social choice changes from one culture to another. And while it is true that the great contribution of the West has been to show that free markets aggregating individual preferences in democracies dominated by a large middle class has been critical for the fast economic growth of capitalism, that does not mean that all critical social choices are, or should be taken, by aggregating individual's preferences + values. First because there are other cultures very distinct from the West, in which models different from the West's have been successful (The Asian growth model); and second because even in the West many critical social choices involve institutional choices taken by institutional leaders that do not come from (and should not come from) a social choice that aggregates individual's preferences + values. Thus, institutional design, and which social choices should involve the institutional leaders and which others must be opened to public discussion and the aggregation of individual's preferences + values, is a fundamental question of social choice that is not address by SCT as presented by Sen.

Part of the problem to develop a social choice theory that adequately integrates the role of institutions is the ideological confrontation between radical liberalism and radical institutionalism (Marxism). Radical liberal-

[87] Ibid.

[88] Ibid.

[89] Ibid.

ism (RL) has pictured institutions as the ideological enemy of individual freedom, and radical institutionalism (RI) has portrayed institutions as if they could substitute the markets and could be efficient and promote economic progress. Comprehensive Institutionalism (CI) argues that once we devoid the scientific contributions, of diverse socio-economic schools of thought, of their ideological elements, they become compatible.

Individual freedom always happens within an institutional arrangement, and therefore institutional design is always a critical component of social choice, but that does not mean that institutions can do it all – it is a learned lesson from classical economics that economic growth in capitalism is related to free markets that cannot be substituted by institutions. But it is also true that free markets to operate require institutions, and that inadequate institutional designs may have critical consequences for the desirability of the socio-economic equilibrium obtained. Free markets do not necessarily provide stability, as the 1930 GD, the 2008 GCF and the 2020 GP have shown – Keynes was right institutional intervention is required[90]. Free markets do not necessarily generate economic growth, as Latin America, and particularly Mexico, has shown[91]. Free markets do not solve the problem of income distribution, the global income distribution between countries if we exclude China and India, continues worsening; and the within country income distribution in many countries in recent decades has worsened[92]. Free markets do not solve the problem of poverty, taken the Western definition of poverty still more than eighty percent of the world's population is poor[93]. Institutions are required to confront all the above-mentioned problems, and institutional failures have critical consequences in the desirability of the socio-economic equilibrium. Today most of the global key problems such as economic underdevelopment, poverty, global economic and financial stability, global climate, global crime, global trade, global health issues, and so on reflect the lack of a proper global institutional arrangement. Yet, institutions cannot do it all. They may be bureaucratic and inefficient. And, as mentioned, they cannot substitute free markets. The precapitalist history shows that without free markets the rate of growth of the world economy was almost

[90] Obregon, C., 2021. *Keynes Today*. Amazon.com. Also available at Research gate.com

[91] Obregon, C., 2018., op.cit.

[92] Obregon, C., 2021. *Poverty and Discrimination*. Amazon.com. Also available at Research gate.com

[93] Ibid.

a survival rate. Economic progress in capitalism is related to free markets and the role played by the fast-changing preferences of the middle class. In particular, the failure of the USSR where institutions attempted to reproduce a capitalist economy by having advance science and technology, high education, learning by doing, research and development, a large market, and high savings, show the importance of free middle-class markets capable to guide the fast technological development that is what distinguished the west from the USSR[94]. Both proper institutions and free middle-class markets are required. To define a social choice both institutions and the aggregation of individual preferences + values are required.

CI argues that social choices are not only related to the economic system, but also to the integrative and the power social systems; and that the three social systems are interrelated[95]. The individual-society relationship must be conceived in the light of what we know nor only in economics, but also in other sciences such as evolutionary biology, anthropology, linguistics, neurobiology, cognitive psychology, social psychology, history, sociology and so on. Once we devoid social sciences from their ideological content, and we restrict ourselves to their findings in the light of the scientific discoveries of other disciplines, what emerges is the view that an isolated individual has never existed, and that a society has never been only consequence of the aggregation of individual preferences + values. Humans were evolutionary born in a defined institutional arrangement that they inherited from their predecessors, which includes its corresponding conceptual system. However, this evolutionary fact does not diminish the importance to understand why individualism, free markets, and a middle-class democracy, were critical in the Western countries to change the whole dynamics of economic growth in capitalism.

In this third chapter we describe the evolution of institutionalism, and we explain how it has always been influenced by two ideological extremes: on one side, the defenders of the critical role of institutions have undermine the role of individualism, free markets, and a middle class democracy in the fast growth of capitalism; on the other side, the defenders of individualism have underappreciate the critical social role

[94] Obregon, C., 2018., op. cit.

[95] In the next chapter, we present CI, and describe how it provides a broader view of the role of institutions in social choices, without undermining the relevance of aggregating individual preferences + values, and in particular the relevance of individualism, free markets, and a middle-class democracy in key western countries in the whole dynamics of the fast economic growth of capitalism.

of institutions, either by leaving them out of their social analysis, or by defining them exclusively as those Western institutions that have made the West successful.

THE ROLE OF INSTITUTIONS IN SOCIAL CHOICES - A HISTORY OF INSTITUTIONALISM

The attempts of diverse schools of economics to explain socio-economic equilibrium (social order) as the outcome of aggregating individual preferences + values can be counted as a failure. Neoclassical economics failed to show the existence of a unique, stable, economic equilibrium that optimizes socio-economic welfare. Sen failed to show that social choices are the result of aggregating individual preferences + values. And behavioral economics results are restricted to a handful of cases and does not show that for the general case an optimum economic equilibrium could be obtained out of non-rational (emotional) behavior. Information economics, game theory, Keynes economics and neoinstitutionalism in economics (NIE), have shown that the economic equilibrium necessarily depends on the institutional arrangement and its corresponding conceptual system.

Today is well established that institutions are critical in the determination of the socio-economic equilibrium; but still institutions are: 1) Seen by many thinkers as those minimally required for the free individual agents economic-society to operate properly (Rational Choice Institutionalism - RCI), or 2) classified as adequate if they are the Western institutions, and inadequate if they differ from the Western institutions (Neoinstitutionalism in Economics - NIE). This resistance to discuss and analyze non-Western successful institutions (such as the Asian growth model), and to openly discuss the deficiencies of the international institutional arrangement, is an inheritance of ideological RL, that ponders individualism as the center piece of global progress and peace, and therefore sees institutions just as a requirement to reach the ideological individualism goals.

In the neoclassical conception of the world the socio-economic equilibrium is uniquely defined out of the interaction between individuals, and institutions are left out of the analysis, which is the methodology used by Sen in his SCT. The old American institutionalism (OAI) explicitly introduced the study of institutions in the determination of the socio-economic equilibrium. However, after 1950 the OAI lost its influence, and the

neoclassical synthesis became the mainstream paradigm in economics. A brief description of what happened to OAI is relevant to understand how the neoclassical paradigm became so powerful in recent times.

The main thinker in OAI was Veblen. He pointed out that the neoclassicals use a fixed human nature to understand the social optimum independent of institutions and history; and that Marx also uses a fixed human nature (although one distinct from the one assumed by the neoclassicals – for Marx the nature of humans is to be a "species being") to give a preconceived teleology to history. In the neoclassicals, he argues, human nature does not change with history; in Marx, humans do change with history, but towards the preconceived realization of their true nature as a "species-being". Veblen's main criticism is directed at the metaphysical preconceived character of the distinct "human natures" introduced by both schools.

Veblen had three key contributions. The first contribution, which is not incorporated by NIE, is the acknowledgment that there is not a fixed essence of the human nature, which meant that the individual Western neoclassical freedom is a historical outcome of a particular historical stage of the West. The second one, which is not fully incorporated by NIE, and which is interrelated to the first, is that human history does not have a "telos" – a specific direction or goal, so that the predictions of Marx based in a fixed human essence as a "species being" must be mistaken. And the third one, which is incorporated by NIE, is that an institution is an evolutionary-historical entity that include habits of life and of thought (implies the need to see thought and action as intertwined). Veblen was right, in fact his first two contributions antecede the contemporary philosophical work of Derrida and others, and the most recent discoveries of neurobiology – which show that humans are incapable to reach the knowledge of universal essences; and with the third contribution he precedes North's vision of institutions.

However, as mentioned, Veblen first contribution was not recovered by NIE. NIE is built with a fixed human nature - "the optimizer creative individual with bonded rationality"- which is a modified version of the neoclassical human.

The reasons why Veblen's though was not recovered later, explain to a large extent how institutionalism in economics ended up in RCI and NIE. Veblen, while recognizing individual freedom, did not understand its importance in the economic growth of capitalism. Moreover, his position was radicalized by Ayres who fully denied individual freedom. The

consequence was Commons and Knight criticism of Veblen and Ayres and their defense of individual freedom, who brought their institutionalism closer to neoclassical economics. Moreover, Mitchell influenced by Veblen explains economic cycles because of institutional actions, but his theory was incapable to explain the 1930 GD and the need of expanding government expenditures, which Keynes theory did. Keynes explicitly define what the governments (institutions) had to do to get the economy out of a major economic crisis. Keynes thought was a limited version of a pragmatic institutionalism that was successful because it confronted the problem of the 1930 GD. OAI became unpopular after 1950, as Keynes thought integrated to the neoclassical thinking in the neoclassical synthesis, became the dominant paradigm[96]. The triumph of Keynes macroeconomics over Mitchell business cycle theory, and later the success of the neoclassical synthesis to integrate Keynes and the neoclassical economics signaled the end of the influence of OAI. Unfortunatly, it had the consequence that Veblen's first two contributions were never rescued. Instead, once due to game theory and information economics it was no longer possible to deny the importance of institutions in the determination of the socio-economic equilibrium, NIE rescue Commons and Knight proposals that were more akin to neoclassical economics.

The integration of Keynes into the neoclassical paradigm through the neoclassical synthesis brought about the Keynesian-Monetarist controversy, which ended up with the triumph of monetarism and of the school of rational expectations, which meant a comeback of the neoclassical school and the end of the theoretical influence of Keynes (and of its pragmatic institutionalism), summarized by Lucas' dictum that Keynes was dead, and that the 1930 GD was a historical curiosum never to happened again. Thus, in the decade of the eighties we saw a movement to reduce the governments size in the economies. But it is necessary to realize that such a movement was a marginal reversal of a long-term fast growth of the governments in Western countries in the twentieth century, they went from around ten percent to forty percent of GDP. Thus,

[96] In other works, I have explained why Keynes became integrated to the neoclassical synthesis. Mainly because Keynes macroeconomics was able to explain an economy into a deep crisis but could not explain an economy near to equilibrium with minor business cycles which is what characterized the Western economies after 1950 (in part because of the greater participation of governments and central banks). Mitchell had a point in that institutional actions may produce economic disruptions, in fact that is the explanation of why major crises do happen that I have proposed, but he never understood this institutional explanation of major crises, he maintained institutional actions only as related to regular business cycles and never propose what institutions must do to get the economy out of a major crisis.

despite the theoretical triumph of neoclassical economic theory in the real world at the end of the twentieth century governments (institutions) made social choices for forty percent of the annual product produced. In the twentieth first century, the 2008 GFC and the 2020 GP brought back Keynes' economics and the full recognition of the importance of institutions (governments and central banks) to maintain the economic stability in advanced economies.

The role of institutions in social choices is all over the place. In non-democratic countries with controlled markets institutions predominantly take social choices; but even in Western countries aimed by individualistic ideas, institutions' influence in social choices is fundamental, as governments represent forty percent of GDP. Therefore, any theory of social choice must consider the role that institutions play in social choices. There are three reasons for which understanding the role of institutions in social choices is critical: 1) Institutions delimit and influence individual preferences + values, 2) many social choices are better taken by institutions than by aggregating individuals + values, 3) the question of institutional design becomes critical in the whole discussion of social choices.

The neoclassical notion of a society as defined by aggregating individual preferences is a theoretical model useful for certain analytical purposes, but clearly is an improper vision of a society when one ask the question of how social choices should be taken.

Ayres was very influential in Talcott Parsons and the beginning of functionalism in sociology, discipline in which social institutionalism (SI) was developed. SI emphasizes institutions over individual agency. Actors comply with institutional rules and norms because other type of behaviors are institutionally inconceivable[97]. Norms and formal rules of institutions shape the actions of those acting within them[98]. It has been argued, however, that it is difficult for SI to explain institutional change (which is better explained by historical institutionalism and evolutionary institutionalism), and that SI fails to describe the behavior of members of an institution that failed to comply with the rules[99] (which can be better

[97] *Scott, Richard W. (2014). Institutions and organizations: ideas, interests, and identities. Sage. ISBN 978-1-45224222-4. OCLC 945411429.*
Schmidt, V.A. (2010), Taking ideas and discourse seriously: explaining change through discursive institutionalism as the fourth 'new institutionalism'.

[98] *March, James G. (1994), Primer on Decision Making: How Decisions Happen, Free Press, pp. 57–58.*

[99] Knight, Jack (1992). *Institutions and Social Conflict*. Cambridge University Press. p. 15. ISBN 978-0-521-42189-8.

explained by rational choice institutionalism). In SI social choices do not reflect individuals' preferences + values which is a great limitation to be able to understand the fast growth of capitalism due to individualism, free markets, and the fast-changing preferences of the middle class of the democratic Western societies. This explains why SI did not have a definitive influence in economics until NIE was able to integrate it.

In political science historical Institutionalism (HI) pointed out that small events and flukes can have large consequences, that actions are hard to reverse once they take place, and that outcomes may be inefficient. They focus their analysis on how timing, sequences and path dependence affect institutions, and shape social, political, economic behavior and change[100]. Path dependence implies that any decision today limits the available future choices for any political actor or institution. Therefore, institutions do not perform with perfect efficiency because they were designed in earlier times. HI two core ideas are: critical junctures, and path dependency. Critical junctures are moments of uncertainty in history. Path dependency arises because the choice of a single path toward some next uncertainty101. HI has the virtue that explicitly analyses social change and describes how social choices are restricted by past decisions. HI has been criticized because the difficulty to choose a critical juncture which is usually done ad hoc by the researcher[102]. And it is also criticized because the locked-in nature of institutions during path dependency[103]. HI like SI cannot explain the influence of individualism and free markets in the economic growth of capitalism, and therefore like SI did not have a major influence in economics until it was integrated by NIE.

In political science, and by some economists out of the main tradition, evolutionary institutionalism (EI) has been developed, which argues that principles from evolutionary theory should be transfer to political science

[100] *Voeten, Erik (2019). "Making Sense of the Design of International Institutions". Annual Review of Political Science. 22 (1): 147–163. doi:10.1146/annurev-polisci-041916-021108. ISSN 1094-2939. Farrell, Henry; Newman, Abraham L. (2010). "Making global markets: Historical institutionalism in international political economy". Review of International Political Economy. 17 (4): 609–638.*

[101] Collier, Ruth Berins and Collier, David, Shaping the Political Arena (Notre Dame, IN: University of Notre Dame Press, 2002)
Mahoney, James, "Path-dependent explanations of regime change: Central America in comparative perspective," *Studies in Comparative International Development,* 2001, 36(1): 111–141.

[102] Peters, B. Guy, Pierre, Jon, and King, Desmond S., "The politics of path dependency: Political conflict in historical institutionalism," *The Journal of Politics,* 2005, 67(4): 1275–1300 at p. 1283

[103] Peters et al., p. 1286.

and economics. EI compares the institution to a gene104. EI integrates aspects of biological evolution with the conscious and strategic decision making that characterizes humans. Preferences interact continually with political institutions, institutional arrangements, and environmental factors.[53] EI, however, points out that ecological factors play a sometimes-decisive role in large-scale changes. The distinctive feature of EI is its willingness to learn from biology and its insistence in the importance of geography, climate and in general geophysical conditions in influencing preferences. EI has been criticized as to how much can EI learn from biology. It is pointed out that the usefulness of genetics is limited, because institutions differ from genes in two key elements: 1) human consciousness of the long-term implications of his/her decisions; and 2) the human society from the beginning is the outcome of an economic surplus, which disconnects somewhat institutions from the survival evolutionary pressures. EI influence in economics has been very limited and it was not integrated by NIE.

RCI sees social phenomena as consequences of individual rational choices. A choice is considered rational if its aim to achieve specific goals, and it is consistent with decision theory given the constrains of the situation. The key elements of rational choice are preferences, beliefs, and constraints. Preference may be consequence of transmitted cultural traits, personal habits, or other sources, but the key factor is that they can be constructed as individual preferences. Beliefs relate to cause-effect relations including the perceived possible outcomes of an individual action. Constrains define the limits under which the individual action takes place.

One of RCI strengths is that it explicit builds social outcomes from individual level characteristics and behaviors, thus it explicitly addresses the micro-macro dimensions[105]. Hedström 2005[106] has suggested that RCI most comply with "social mechanism reasoning" which implies that: a) the explanation of macro phenomena must specify the opportunities and

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[104] Lewis, Orion A. and Steinmo, Sven, "How institutions evolve: Evolutionary theory and institutional change," *Polity,* 2012, 44(3): 314–339.
Blyth, Mark, Hodgson, Geoffrey, Lewis, Orion, and Steinmo, Sven, "Introduction to the special issue on the evolution of institutions," *Journal of Institutional Economics,* 2011, 7(3): 299–315. P.300
Lustick, Ian S., "Taking evolution seriously: Historical institutionalism and evolutionary theory," *Polity,* 2011, 43(2): 179–209. P.190.

[105] Huber, J., ed. 1991. *Macro-micro linkages in sociology*. Newbury Park, CA: SAGE.

[106] Hedström, P. 2005. *Dissecting the Social: On the principles of analytical sociology*. Cambridge, UK: Cambridge Univ. Press.

preferences of individuals at the micro level; b) specify how individual-level preferences and constraints affect individual-level (behavioral) outcomes; and c) the aggregation of individual-level outcomes that brings about collective-level outcomes. RCI starts with the simplest set of assumptions possible[107].

Diverse efforts have been made to make RCI compatible with individuals which preferences are either bounded or less rational. Jones 1999 discusses RCI in the context of bounded rationality[108]. Lindenberg 2013 proposes to consider the limited self-regulating capacities of human beings[109]. Fehr and Gächter 2002 point out that empirically individuals exercise altruistic punishment – individuals at their personal expense are willing to penalize free riders (a finding of behavioral economics, which includes psychology and emotions into the preferences)[110]. Efforts have also been made to make RCI compatible with asymmetric information (analyzed initially by Akerlof, Spence and Stglitz – Nobel laureates)[111]. And RCI has also consider the dilemmas that arise in game theory, such as the prisoner's dilemma[112], the dictator's game[113] or the volunteer's dilemma[114]. RCI has also been studied as to the influence and emergence of exchange structures[115]. Finally, RCI has been identified with NIE although there are significant differences.

The main criticism of RCI, made both by SI and HI, is that the assumption that individual actors have exogenous preferences is unwarranted. Riker argued that we are unable to distinguish whether outcomes

[107] Lindenberg, S. 1992. *The method of decreasing abstraction. In Rational choice theory: Advocacy and critique*. Edited by J. S. Coleman and T. J. Fararo, 3–20. Newbury Park, CA: SAGE.

[108] Jones, B. D. 1999. Bounded rationality. *Annual Review of Political Science* 2.1: 297–321.

[109] Lindenberg, S. 2013. Social rationality, self-regulation, and well-being: The regulatory significance of needs, goals, and the self. In *The handbook of rational choice social research*. Edited by R. Wittek, T. A. B. Snijders, and V. Nee, 72–112. Stanford, CA: Stanford Univ. Press.

[110] Fehr, E., and S. Gächter. 2002. Altruistic punishment in humans *Nature* 415:137–140.

[111] Bacharach, M., and D. Gambetta. 2003. Trust in signs. *In Trust in society*. Edited by K. Cook, 148–184. New York: Russell Sage Foundation.

[112] Simpson, B. 2003. Sex, fear, and greed: A social dilemma analysis of gender and cooperation. *Social Forces* 82.1: 35–52.

[113] Güth, W., R. Schmittberger, and B. Schwarze. 1982. Experimental analysis of ultimatum bargaining. *Journal of Economic Behavior & Organization* 3.4: 367–388

[114] Diekmann, A. 1985. Volunteer's dilemma. Journal of Conflict Resolution 29.4: 605–610.

[115] Snijders, T. A. B. 2001. The statistical evaluation of social network dynamics. *Sociological Methodology* 31.1: 361–395.

resulted from institutions or from the preferences of actors. which made it impossible to predict optimal outcomes[116]. Moe argues that RCI neglects the role of power in shaping outcomes[117]. Barret and Finnemore maintain that RCI cannot explain institutional pathologies[118]. Wendt and Pierson sustain that individuals are guided by appropriateness rather than by consequences[119]. March and Simon argue that actors rely on routinized responses to problems that emerge, as opposed to evaluating and deliberating on the optimal response[120]. Spruyt maintains that we cannot simply deduce institutional outcomes from preferences or impute preferences from observed outcomes[121]. RCI cannot explain an institution's change over time, nor its differences from other institutions[122]. RCI assumes actors that possess too much objective rational decision-making based on full information concerning a choice-scenario. This is not realistic[123].

While RCI explicitly solves why individulism and free markets, on which the fast changing preferences of the middleclass are expressed, in Western democracies contribute to the economic growth of capitalism; it presents institutions as a minimum requirement to obtain the socio-economic equilibrium. And consequently there is not a full understanding of the role of institutions in shaping social choices, and there is not an analysis of the social impact of distinct institutional designs.

Thus we are left with a dichotomy in which SI explains the role of institutions in social choice, but undermines individualism, and cannot

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[116] Riker, William H. (1980). "Implications from the Disequilibrium of Majority Rule for the Study of Institutions". *American Political Science Review*. 74 (2): 432–446.

[117] Moe, Terry M. (2005). "Power and Political Institutions". *Perspectives on Politics*. 3 (2).

[118] Barnett, Michael N.; Finnemore, Martha (1999). "The Politics, Power, and Pathologies of International Organizations". *International Organization*. 53 (4): 699–732.

[119] Wendt, Alexander (2003), "Driving with the Rearview Mirror: On the Rational Science of Institutional Design", *The Rational Design of International Institutions,* International Organization, pp. 259–290, Pierson, Paul (2000). "The Limits of Design: Explaining Institutional Origins and Change". *Governance*. 13 (4): 475–499. doi:10.1111/0952-1895.00142. ISSN 0952-1895.

[120] March, James G.; Simon, Herbert A. (1993-05-07). "6". *Organizations*.

[121] Spruyt, Hendrik (1994). *The Sovereign State and Its Competitors: An Analysis of Systems Change*. Vol. 176. Princeton University Press. p. 26

[122] Weyland, Kurt, "Limitations of rational-choice institutionalism for the study of Latin American politics," *Studies in Comparative International Development,* 2002, 37(1): 57–85.

[123] Peters, B. Guy, Institutional Theory: Problems and Prospects (Vienna: Reihe Politikwissenschaft/Institut Für Höhere Studien, Abt. Politikwissenschaft, 2000), p. 18, http://nbn-resolving.de/urn:nbn:de:0168-ssoar-246573.

explain social change, HI explain scoial change and the role of institutions in social choice, but also undermines individualism. And RCI explicitly incorporates the role of individualism in social choices, but undermines the role of institutions, both in social choices and in social change. This dichotomy is going to be partially solved by NIE.

Neoinstitutionalism in Economics (NIE)

NIE argues that given the purpose of analyzing the influence of institutions in distinct cultures, EI becomes irrelevant. NIE borrows from SI the determinant influence of institutions on individual behavior and borrows from HI the importance of path dependence. But NIE maintains a fixed human nature of an "optimizer creative individual with bonded rationality", therefore the adequate institutional arrangement (the one of the West) is the one that allows for this individual's creativity to be realized- which is the engine of economic growth, and the inadequate institutional arrangement (the one of underdeveloped countries) is the one which restrains such individual's creativity. By introducing this fixed human nature, NIE can become compatible with RCI, SI, and HI, because although there is path dependency and institutions are a critical influence in individual choices, whenever the institutions are the adequate ones (like the ones of the West) RCI operates properly (under bonded rationality). NIE, while maintaining the relevance of individual preferences and values, clearly shows the importance of the influence of institutions in social choices. Moreover, NIE introduces the importance of social engineering, which clearly shows the relevance of social choices related to institutional design.

NIE starts with the contributions of Nobel prized Coase, who proposed[124] that frictionless neoclassical economics does not correspond to the real economy—which is characterized by transaction costs (costs of seeking and obtaining information, costs of negotiating and deciding, and costs of policing and making contracts effective). In this frictional economy, the property rights system defines the incentives of economic agents.

[124] 1937, 1960. Coase, R.H. (1937): "The Nature of the Firm", *Economica* 4, pp. 386-405. Reimpress in Stigler, G.J., y Boulding, K.E. (eds.): *Readings in Price Theory,* Richard D. Irwin, Homewood, 1952. Coase, R.H. (1960): "The Problem of Social Cost", *Journal of Law and Economics* 3, pp. 1-44.

In this type of economy, both problems of asymmetric information and incentives are central, and the theory of contracts becomes basic for the analysis of both issues

The historical roots of NIE's thought are found in the North American institutional thought of Commons. This author defined the institution as collective action in control of individual action[125]. Commons placed special emphasis on the study of the transaction as a transfer of property. It is particularly notable that there is no influence of Veblen's thought in NIE, and this is particularly due to the vision of NIE, which contemplates history and institutions only from the point of view of the institutional arrangement that characterizes the West, so that a broader and more general point of view, such as Veblen's, was left aside. As we have pointed out, there is a close connection between the vision of a world characterized by uncertainty, the absence of information and the presence of institutions. It is therefore not surprising that one of the thinkers who influenced the thinking of NIE was Frank Knight. Knight's uncertainty allowed this author to identify moral hazard as a problem endemic to all economic organization[126]. In Coase's vision, the economy is conceived as an active process of contracts that, by their very nature, are incomplete and force decision-making under a bounded rationality. In this world transactions are expensive; in Arrow's words, "transaction costs are the costs of putting the economic system to work"[127]. In this new economic world characterized by information frictions, three topics become central: I) the analysis of transaction costs; II) the study of contracts, and III) the problem of governance of contractual relations.

As Nobel prized Stiglitz and others have pointed out, the lack of information leads us to a world where multiple equilibriums are possible, so that there are various Paretian optima depending on the institutional arrangement in place. Once economic rationality is limited, the question arises as to what parameters to use for comparisons between institutional arrangements, and here we fully enter politics, culture, history, ethics, and so on. At this moment, the world can no longer be ordered from

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[125] Commons, J.R. (1934a): *Institutional Economics: Its Place in Poli-tical Economy,* University of Wisconsin Press, Madison/Macmillan, New York. P.69.

[126] Knight, F.H. (1922): *Risk, Uncertainty, and Profit,* Harper & Row, New York.

[127] Arrow, K.J. (1969): "The Organization of Economic Activity: Issues Pertinent to the Choice of Market versus Non-Market Allocation", in *The Analysis and Evaluation of Public Expenditures: The PBB-System,* Joint Economic Committee, 91st Cong. 1st Sess., vol. 1, Washington, Government Printing Office. P. 48.

best to worst unless we introduce non-economic parameters. NIE opened itself to this new world of institutions, but attempted to partially close itself again by using Western institutions as a frame of reference for the "best"- which is able to do because of the assumption of a fixed a historical human nature; such attempt is indefensible.

Williamson has studied the organization as a market alternative to reduce and optimize transaction costs and has done so from the analysis of contracts in a partnership within the institution of private property. Williamson makes the transaction the unit of analysis[128]. The transaction cost economy proposed by this author "is interdisciplinary insofar as it involves aspects of economics, law and organizational theory"[129]. Under this perspective, organizational variety is explained because of optimizing transaction costs. The new approach is microanalytic, based on behavioral analysis, recognizes the importance of asset specificity, and uses comparative institutional analysis. The company is conceptualized as a governable structure and not as a production function. Private institutions are the basis of the governability of contracts and the court is only seen as a last resort.

The analysis of incentives generally refers to the ownership structure and the characteristics of the agent who carries out the economic act. The literature on property rights is extensive and seeks above all to define which are the property structures that most favor productive incentives in economic agents[130]. The property regime is critical for aligning incentives, but the court is not efficient in resolving disputes and therefore, the private institutions that serve as support ex-post to the contract are essential, hence the importance of governance. The negotiation is permanent and includes the post contract period. Governance and asset measurement and specificity issues are interdependent. Thus, the world of the

[128] Williamson, O.E. (1985): *The Economic Institutions of Capitalism,* Free Press, New York.

[129] Ibid, p. 387.

[130] In this tradition we find Coase (1960), op. cit. Alchian (1961 and 1965), Demsetz (1967 and 1969), North (1973, op. cit. 1981 and 1990). Alchian, A.A. (1961): *Some Economics of Property,* RAND D-2316, RAND Corporation, Santa Monica (CA). Alchian, A.A. (1965): "Some Economics of Property Rights", *Il Politico* 30, pp. 816-829. Demsetz, H. (1967): "Toward a Theory of Property Rights", *American Economic Review,* papers, and proceedings 57, pp. 347-359. Demsetz, H. (1969): "Information and Efficiency: Another View point", *Journal of Law and Economics* 12, pp. 1-22. North, D.C. (1981): *Structure and Change in Economic History,* W.W. Norton, New York. North, D.C. (1990): *Institutions, Institutional Change and Economic Performance,* Cambridge University Press, London/Cam-bridge University Press, Cambridge, 2004.

contract can be described based on three basic characteristics: 1) bounded rationality; 2) opportunism, and 3) asset specificity.

Technology and asset ownership are important but not sufficient to define the economic organization, which crucially depends on the transaction costs, determined from the governance structure, which strongly influence the prevailing economic incentives. Therefore, the institutions that define the governance structure are a critical element of the definition of the socio-economic equilibrium obtained. Transaction cost economics has been successfully applied to the fields of industrial organization, labor economics, and the study of modern corporations. This new approach has also been used in the analysis of comparative economic systems[131], and in the study of family organizations[132].

It must be realized, however, that Williamson's empirical organizational study implicitly carries with it a specific society. Thus, this method is fertile for studying the social institutions of the West, but it is inadequate for comparative study with other societies. Williamson acknowledges, for example, that labor contracts are delimited by family considerations, reputation effects, relations between present and future generations, etc., and points out that the economic contract requires studying and understanding these and other delimitations. But what Williamson does not see clearly is that all these social delimitations to the economic contract vary substantially in different cultures with different conceptual systems, so that the institutional study must refer to these great conceptual systems if it wants to understand the history and differences between distinct societies. Discarding the macroeconomic study of institutions and concentrating on microeconomic analysis forces us to look at history from the incentives that the Western individual receives or fails to receive, an individual who is not even differentiated in some other non-Western societies and other historical stages of the West[133].

Williamson's contractual individual is defined from bounded rationality and opportunism. Bounded rationality keeps economic man rational but limits his rationality by acknowledging uncertainty and lack of information, thus giving rise to the need for institutions. Opportunism recognizes the economic individual seeking his own interest and extends it to situations ex-post of the contract, thus giving rise to what is known

[131] Sacks, S. (1983): *Self-Management and Efficiency,* George Allen & Unwin, London.

[132] (Pollack, 1983) Pollack, A. (1983): "Texas Instruments' Pullout", *The New York Times,* October 31 de 1983, p. D1.

[133] Obregon, C. *Teorias del desarrollo economico,* op. cit. chapter 2.

in the economic literature as adverse selection and moral hazard. Adverse selection includes individuals not giving information about themselves or what they know when it is not in their interest to do so, for example: buying insurance and selling used cars. Moral hazard is related to the possibilities that the contract made ex-ante is distorted or not fulfilled ex-post. Three features of the economic environment make Williamson's contractual nature of humans particularly relevant: asset specificity, uncertainty, and transaction frequency. The more relevant these characteristics are, the more evident is the limited rationality of the economic human, the greater the possibility of opportunism and the highest the need for private institutions that carry out ex-post arbitration.

The contractual individual of Williamson's transaction costs economy is exported through space and time and becomes the indisputable essence and axis of any social structure. The consequence of this approach is to look at history and other non-Western societies from the West's institutions and apply a metric and a unit of analysis that do not correspond to them. NIE relaxes the economic rationality of the economic agent by introducing a bounded rationality, which allows the introduction of uncertainty, the absence of information and the institutions. But it must be pointed out that NIE keeps the individual rational because, even given his/her bounded rationality, he/she is a calculating individual, one who optimizes transaction costs. The institutions that these individual builds seek to optimize transaction costs. In this approach, economic relations —transactions— are not only the unit of analysis, but also the axis of social life. Society is defined by the bounded rationality of the contractual optimizer individual and his opportunism, and the individual by his permanent desire to carry out economic transactions. This view of society while relevant for Western societies, is inadequate for non-Western societies.

The economy of transactions costs is a clear advance over the neoclassical economics' rational human, because by delimiting the rationality of the latter, it allows us to realize the importance of analyzing the institutions. However, it is far from being an adequate institutional analysis even of Western society, since it restricts the analysis to those institutions that arise from seeking the optimization of the transaction cost. Given the importance of economic life in the overall life space of the Western individual and given the individual's relative independence from society in the West, this transaction cost approach is clearly useful in the study of the Western institutions, but even here it is insufficient, since there is a set of non-economic institutions that it would be very difficult to explain

by this method; think for example in parenthood or in the church. For societies other than Western society, or for the study of the historical roots of the West, in which the individual is little or not at all differentiated, the attempt to explain institutions from the contractual optimizer individual is not relevant or useful.

North's NIE

For North, the state can be explained in terms of an implicit contract between it and the citizens. The function of the State is to provide protection and justice, which includes protecting the rights to property and to enter contracts. Conceptually, the implicit contract between citizens (the principal) and State leaders (the agent) is a relational contract subject to both bounded rationality (uncertainty and incomplete information), asymmetric information and opportunism both ex-ante and ex-post. It is, therefore, crucial to determine which are the institutions that serve to renegotiate the ex-post contract. In the case of the State, these institutions are related to the principle of separation of powers and the constitutional State. Political institutions give stability to an otherwise chaotic democracy governed by majority rule[134]. Thus, it is already clearly understood that institutions are fundamental and essential for social choices, which, without institutions just cannot be taken. North points out that political institutions are not necessarily efficient, which is why a constitutional State organized as a democracy continues to have problems: basically, the conflict for power can get out of the constitutional channel[135].

At the level of international relations, the safeguarding of private property is essential for NIE, as well as the possibility of transferring said property and respecting established contracts. The problem, however, at the international level, is that there is no global authority that guarantees property and contract rights.

For North, history is important because institutions connect the past with the present and the future[136]. North explains institutions as the great

[134] Moe, T.M. (1990): "Political Institutions: The Neglected Side of the Story", *Journal of Law, Economics, and Organization,* special issue 6, pp. 213-253.

[135] North, D.C. (1990): *Institutions, Institutional Change and Econo-mic Performance,* Cambridge University Press, London/Cam-bridge University Press, Cambridge, 2004.

[136] For a broader discussion of North's ideas, see Obregon, Teorias del Desarrollo economico., op. cit.

framework that establishes the conditions that determine the way in which external stimuli are interpreted. Given increasing returns to scale and a world with positive transaction costs, economies are subject to multiple equilibria with path dependence. In this way, given the same economic stimulus, two societies respond differently given the social and political institutions that each of them has. North's example is the response of Spain versus England to the fiscal crisis of the States imposed by the conditions of world military confrontations. In England, parliament restricts the King's power, and it becomes responsible for taxes and military spending; in Spain, centralism is reinforced, and the State is financed through conquests; the Spanish courts failed to break centralism. The initial response is a consequence of the political-social conditions of the moment. In England, the productive process had diversified the sources of income and power; in Spain, the conquest of America concentrated them into the monarchy. Over time, the initial response is reinforced and gives rise to interest groups and social structures that defend the initial positions. In this way, Latin America inherits Spanish centralism, while the United States and a substantial part of Western Europe delve into the consequences of English individual rights.

A central point of North's analysis is that a key characteristic of the West's success is that formal institutions emerged naturally from informal ones, so that no tension was created between the two sets of institutions. In contrast, in Latin America the adoption of formal Western-style constitutions was conceived amidst tensions with informal institutions. The consequence in these cases, says North, is that informal organizations often prevail. Despite the symbiotic process between formal and informal organizations, in the long term, societies present dependent trajectories, due to the resilience of informal institutions (ability to remain in the face of significant changes); which explains why, despite the tremendous technological and productive development worldwide, some societies remain behind in relation to the West.

For North, the difference between a successful society, and one that is not, is that the former provides the right incentives for innovation. According to North, the incentives for innovation come from the expansion of exchange; but also, and decisively, from institutions that protect private property and the rights to innovate, such as patents. North, however, points out that exporting the Western model to a society with different informal institutions is not necessarily successful, as the case of India shows. Thus, the solution is not obvious, but in any case, to North

it seems that the Western model provides the necessary ingredients for success. This author asserts that success is intimately linked to the individual's creativity, and the individual's rights: the individual is the agent of change in history[137]. North points out that institutional changes are only generated when powerful groups with the capacity to influence the institutional arrangement decide to make them. The interests of these groups are what often prevent the establishment of Western institutions in backward countries. Even though North does not provide an answer here, he does make it clear that change requires aligning the interests of these groups with the long-term social interest.

North's thought is a critique of neoclassical economics, in which information has zero cost, so that, even with increasing returns, the social system via the price mechanism tends to correct itself and always find the optimal solution. In the neoclassical world, institutions don't count, North argues, and history is irrelevant, so societies don't have path dependencies.

North's social theory of institutions is also a critique of Marxist economics since the determinism towards communism has not been corroborated by history. North acknowledges that Marxism has important contributions, particularly regarding the importance of the political process, ideologies, and interest groups in determining economic behavior. However, Marxism, like the neoclassical school, is based on a rational individual and ultimately the consequence is an optimizing process that leads, in the neoclassical case, to obtaining the a-historical economic optimum and, in the case of the Marxism, to a deterministic movement towards an idealistic communist humane society. In North's social thought, individual rationality is bounded: the individual is opportunistic, there is uncertainty, information is expensive, and institutions provide stability to the political-economic perception of reality. In this world, institutions count but are far from being necessarily efficient: they reflect the interests of power groups and give rise to dependent trajectories. Therefore, the evolutionary rationalism characteristic of both Marxism and the neoclassical school can be delayed for very long periods.

A basic difference between Williamson and North is the distinction the latter makes between organizations and institutions. For North, organizations optimize within the broad historically given macro-institutional framework.

North's central purpose is to determine how institutions, that favor the kind of cooperation that allow economies to capture the benefits

[137] North, 1990, p. 83., op. cit.

of exchange that were central to Adam Smith, evolve. Thus, North considers the study of the following topics: A) institutions; B) institutional change, and C) economic performance[138]. We will analyze each of them below.

Institutions are the restrictions created by humans to delimit human interaction. "As a consequence, they structure the incentives in human exchange, be it political, social, or economic. Institutional change delimits the way in which societies evolve over time and, therefore, is the key to understanding historical change"[139].

For North, "institutions are a creation of human beings. They evolve and are altered by human beings; therefore, our theory must begin with the individual"[140]. But who is the individual that North has in mind? The individual that North uses in his analysis has bounded rationality and is opportunistic.

The institutional framework does not develop automatically, and implies a delicate balance between informal restrictions, formal rules, and the structure to guarantee that the agreements are fulfilled. This delicate political-economic balance defines order and economic progress in societies.

Informal institutions provide constraints on people's behavior in all societies, from primitive societies to the most advanced ones. For North, economic exchange occurs within informal institutions that are broader than the pure economic utility of the individual; restrictions include ideology and other values such as honesty, integrity, preservation of an individual reputation, and others.

The difference between formal and informal institutions is, for North, only one of degree. As societies become more complex, the rate of return on formal rules rises. The latter can complement and increase the efficiency of informal rules, be they political, judicial, economic, or contractual. Formal rules reflect private interests and are not necessarily efficient in society.

Political rules reflect the interests of many groups, including political leaders. The interests of the State may or may not reflect the interests of citizens. In general, democracy improves the political efficiency of the system, but it is always far from being an efficient system.

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[138] Ibid.

[139] Ibid, p. 3-

[140] Ibid p. 5.

The world of personal exchange without institutions that stabilize it, is very fragile. The simplest institution that can be thought of is that of a third party guaranteeing that what has been agreed is fulfilled. Historically, this would seem to be the function of the State; but we must be careful because the State itself is part of the exchange process and can easily abuse power in their favor. The institutional balance by which stability is provided to what has been agreed upon is sophisticated, and involves a balance of political power—which, for example, is the intention of developed Western democracies. How this delicate balance is generated is a complex process that depends not only on formal rules but also on the set of informal institutions that accompany it. In general terms, we can describe how it happened in the West, but this does not mean that it is easily reproducible within another social structure characterized by other informal institutions.

"Organizations incrementally alter institutional structure"[141]. Organizations are created based not only on institutional constraints but also on other constraints such as technology, income, and preferences. Given the influence of the institutional framework on organizations, they "are not necessarily, however, productive in society because the institutional framework frequently has perverse incentives"[142].

While Williamson conceives the organization as the result of positive transaction costs[143], and Barzel sees it as the result of positive measurement costs[144], North, without denying that the organization serves what is mentioned by those authors, emphasizes the fact that the organization crucially depends on the institutional framework in which it operates. North's thesis is that the optimizing entrepreneur is an agent of change, but in the direction specified by social institutions.

Institutions are not necessarily efficient; its basic objective is to provide formal and informal rules that serve as restrictions and generate a dependent path and, therefore, stability without which social choices could not be taken. But institutions, though slowly, also change over time. Changes in relative prices are the fundamental source of change because they modify the incentives in human interaction. The only other source for institutional change is changes in preferences.

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[141] North, 1990, p. 73., op. cit.

[142] North, 1990, p. 73., op. cit.

[143] Williamson, 1985., op. cit.

[144] Barzel, Y. (1982): "Measurements Cost and the Organization of Markets", *Journal of Law and Economics* 25, pp. 27-48.

When changes are minor, changes in prices (reflecting changes in population or in environmental opportunities) and in preferences (for example, the cultural view of slavery), they are absorbed within existing institutions. When changes are significant, so that the benefit of the change is greater than the cost of implementing it, the formal institutions change, and the informal ones do not. When formal institutions change, an imbalance is generated, which in the short term means that informal institutions attenuate the initial change of formal organizations and favor a process of incremental change, while in the long term they are equivalent to a slow adaptation of informal institutions. The latter provide stability to social change, and even seemingly revolutionary social changes are often attenuated by informal rules.

North conceives the process of economic change[145]as the result of demographic, knowledge expansion and institutional changes; that is, changes in "1) the quality and quantity of human beings; 2) the stock of human knowledge in particular regarding human command over nature, and 3) the institutional framework that defines the deliberate incentive structure of a society"[146].

For North, the process of economic change involves the interaction between very different elements of society. There is a genetic basis, which, however, is not decisive for North, as shown by the cultural differences in the historical development of different societies. The world is non-ergodic (that is, it does not repeat itself and always changes) and is characterized by uncertainty regarding the future, a la Knight, which cannot be reduced to probabilistic terms. That is why neoclassical theory cannot explain historical change. Institutions reduce uncertainty, set demographic incentives, and encourage the accumulation of learning. Institutions are the external manifestations of the internal system of beliefs, with which humans established their consciousness regarding the reality that surrounds them and under which social choices are taken.

The difference between social change and Darwinian evolution is that the former is a consequence of intentional decisions based on a belief system. This consciousness is a mix between the rational and the irrational. The belief system and institutions condition learning and the accumulation of knowledge. In this way, beliefs and institutions formed in the past influence present individua and social choices and path dependence

[145] North, D.C. (2005): *Understanding the Process of Economic Change,* Princeton University Press, Princeton.

[146] Ibid. p. 1.

is generated. Learning is not only individual but is conditioned by culture. For North institutions are a critical element in the determination of social choices. For him, the neoclassicists were right that human history is formed based on individual choices, but these choices, contrary to what the neoclassicists thought, are not only the consequence of rational individual preferences + values but are determined also by a system of rational and irrational beliefs delimited by the institutions. Given the inadequacy of perceptions, the results are often different from the intentions. Social choices, moreover, are frequently influenced by the interests of the leaders of said society, which biases the decisions of what would be socially appropriate.

The big difference North sees between the West and other societies is that, while historically the West itself and other societies were structured to deal with the physical environment, in the modern West much of the institutional structure is about dealing with problems of the social environment. Therefore, the question of social choices related to institutional design become more relevant. Institutions, says North, define the formal and informal rules and procedures to ensure compliance. In North's world institutional design becomes a central goal of social choice. From the institutions, the political and social structure is defined, which is critical to economic behavior. In general, societies can have a process of order or disorder. Authoritarianism can preserve order and is preferable to disorder; however, authoritarian systems tend not to adapt well to profound changes. North points out that democracy is more apt to establish flexible social systems, with greater capacity to adapt, as is the case in the United States and before England. The success of the West is because, given its fortunate historical development, it managed to develop a flexible system of beliefs and institutions, capable of adequately reading reality (based on a theoretical-scientific culture) and adapting to it. Instead, the failure of Russia and the relative failure of Latin America can be explained by the rigidity of its institutions and the inflexibility of its belief systems.

North refers to the work of anthropologists who establish that the human mind is the product of a long period of adaptation, during which myths served to establish order in a world aimed at controlling the physical environment, so that humans are genetically programmed to personal exchange and the acceptance of non-rational interpretations of reality. The modern world, with the establishment of scientific discipline and personal exchange, stands in opposition to these long-term genetic-cultural trends, so that there is nothing automatic about the implantation of the

institutions of the Western world but that, on the contrary, cultural resistance is to be expected.

Smith's world requires impersonal exchange, specialization of knowledge, efficient factor markets, and government limited by institutions, so that the government does not abuse his power for its own benefit. None of these requirements is easy to implement; in the West they became a reality because of historical accidents, but their migration to other cultures is difficult and will receive resistance. North criticizes the neoclassical economists for failing to understand these complexities, and assuming therefore that "there is such a thing as laissez-faire and that once efficient property rights are established and the operation of law is established, the economy is going to operate well without the need for further adjustments"[147].

For North, "you have to understand the process of economic growth before you can improve economic performance and you must have an intimate understanding of the individual characteristics of that society before be ready to try to change it. Thus, one must understand the complexities of institutional change to be effective in carrying out such change"[148]. According to North, in any attempt to institutional design, the institutional structure inherited from the past must be considered and how changes can be resisted, either by the belief system or by the interests of the leaders. A system that tries to force formal changes will fail when these oppose the informal structure. You cannot change an institution and leave intact the others, which are opposed to the new institution.

North recognizes that Korea, Taiwan, Singapore and, recently, China, have been more or less successful in the economic field despite having done so historically based on authoritarian regimes; however, for North this is a transitory phase and those countries will eventually have to find a development model, if not identical to the West, with basic similar characteristics, such as: the implementation of better product measurement technologies, the establishment of property rights, the creation of an efficient judicial system and the establishment of institutions to resolve disputes and concentrate social knowledge.

North assumes that we know what the ideal institutions are that would promote the development of poor countries (essentially institutions like the West), but we also know that their implementation in other cultures is very delicate and, therefore, there is no certainties of whether

[147] Ibid. p. 122.

[148] Ibid. p. 165.

we will be successful: "there is no certain formula to achieve economic development"[149].

Thus, North is unclear about the future of underdeveloped societies. And, while for him the future of the West is partially assured by the flexibility and adaptability of its institutions; North points out that the Western future may also be at risk. The decline of past civilizations shows us that "adaptive efficiency can also have its risks"[150].

CONCLUSION

NIE has made possible to reconcile individualism with institutions and has shown that for the history of the West both area crucial for social choices. In addition, it has brought our attention to the importance of institutional design, which however is not easy to do and most consider the informal institutions of each society. NIE clearly establishes that social choices can never be just the result of aggregating individual preferences + values because those preferences and values already ocurr in a historical institutional context which is crucial in the determination of social choices.

North's work has the enormous importance of having revived the discussion of the importance of institutions in a historical economic analysis, which allows us to understand: a) that institutions have a decisive influence on individual decisions and in social choices, and b) that in order to understand the economic development of a country and the possibilities of accelerating it through institutional design, it is necessary to carefully study its own historical institutional arrangement.

However, North's proposals are dominated by an element of idealism. For him, economic development implies, in one way or another, imitating the West. Although North recognizes that this imitation could take different forms, the ideal, for North, is the West. North, as Williamson, exports, through history, the opportunistic optimizer human with bounded rationality – a modified version of the neoclassical Western individual. In this way, for North the individual is the central axis of historical change; progress in history occurs when society modifies the property

[149] Ibid. p. 165.

[150] Ibid. p. 169.

regime to provide the individual with better incentives for innovative behavior. But seeing history as a product of the innovative behavior of the Western individual does not do justice to the fact that the individual only differentiates himself from society through a very slow process, as Veblen rightly pointed out.

North's idealism generates a permanent bias in his analysis; history is seen from the idealism of the Western individual, and this prevents North from seeing the relevance of the community in the historical process. Not only is the community the natural way of development of the individual, given the cultural genetic load of his long hunting periods; but the community explains, better than the individual, the history and development of non-Western societies such as those of Asia, Africa, Latin America, and the communist countries. As Veblen argued, tthe Western individual is the accidental product of a period in history and, without denying his great importance in the development of capitalism, it must be recognized that even in the Western historical case the relevance of the individual has been exaggerated by NIE.

First, Western history prior to capitalism, like that of other cultures, is better explained by the community than by the individual. And secondly, even the history of capitalism cannot be understood only from the individual; in fact, it is democracy, through the establishment of the rights of the middle class, which guarantees the consumption of this class, which would be the engine of growth that would distinguish capitalist empires from other previous empires, and which has allowed their unexpected and successful expansion In the Western world, the participation of governments in the gross domestic product has gone from 10% to 40% in twentieth century. Capitalist expansion has undoubtedly been associated with the expansion of the rights of the community over those of the individual. In this sense, the isolated individual, innovative producer, is not what best defines even the cultural history of the West. As Galbraith already pointed out many years ago, large corporations are increasingly the owners of basic production processes and, without downplaying individual creativity, it is far from being the central axis even of Western history.

North's idealism has important implications, for if we abstract from the difficulties that he has pointed out and we assume that the implementation of the Western ideal institutions is possible in developing countries: What would be the results? According to North, individual creativity would be unleashed and the economic performance of these countries

would automatically improve. However, this view leaves aside the problem of the lack of worldwide institutions that adequately coordinate global political and economic relations. For North's ideal proposal to work, his ideal would have to be established not only in each underdeveloped country, but also worldwide (global democracy, global justice and so on), and here we really come to the very impossibility of the ideal; for even North would not argue that this ideal should be pursued. Democracy at the world level, clearly has no relevance or applicability in today's world.

At the global level, it is necessary to accept the limits of democracy and the current impossibility of a global democracy, and to design an alternative institutional arrangement that allow the proper functioning of the international community. Strong global institutions are required.

The free, productive, and innovative economic agent, provided with the necessary incentives from the appropriate institutional framework, is not the only possible social arrangement to obtain economic development, not is it necessarily the optimal one. It is true that it has been critical for the West, but it has not been the only axis of the explanation of the economic development of the West, it is not the basis of international relations, and it will hardly be the solution for underdeveloped countries.

The problem with North's views is that by imposing an ideal element on his analysis, it becomes the axis of explanation of the past and the construction of the future. North fails to appreciate the importance of communal traditions in the economic development of the West, and particularly their definitive role in Asia. The lesson from the successful Asian countries is not that temporarily efficient institutions can be implanted in constant search of the Western ideal, but that there are other possible development paths using the strengths of the history of each of these communities to compete globally with the West. This requires institutional changes that allow productive interaction with the West, but these changes are far from being the beginning of a "later emulation of the West". The ideal element in North's social vision is not justified.

China has shown that marginal economic changes can create economic growth. In general, the economic expansion of Asia questions North's thesis about the negative consequences of that continent having the wrong (non-Western) beliefs and institutions. North's work is more successful in understanding the failure of Russia, and the relative failure of Latin America, than it is in understanding the reason for Asia's success.

North is correct that the new property rights are a fundamental part of economic modernity, but in our view, they are only one of several

features of modernity. These new ownership structures are really the consequence of previous commercial expansion and of the new trade promoted by Asia and America. Before the commercial expansion, Europe had to produce manufactures, and in those European countries where the State was less strong, a natural process of democratization of the production process took place; just as it had previously happened in Greece versus Persia, now it happened in Holland and England versus Spain and France. As in Greece and Rome, the increase in trade is associated with redefinitions of property rights. But it is not the new property rights that produce incipient capitalism; what saves Europe from a new Malthusian crisis is the discovery of America and the renewed trade with Asia; without this, the European seventeenth century would have been like the thirteenth despite the new redefinitions of property rights.

The most important political change of modern times was, in England, the Parliament's control of military spending and taxes, an issue for which Cromwell cut off the English King's head in 1649. The new political phenomenon in the West is democracy, a product of the growth of cities and the relative weakness of the monarchs in some European states such as Holland and England. The weakness of the monarchs in these countries is the consequence of the productive process in them, which distributes income and, therefore, also distributes economic power more democratically. In France, more than a century later, the democratic phenomenon is also imposing itself. The process of democratizing is associated with redefinitions in property rights, but these are not a cause but a consequence of democracy, The dominant social phenomenon throughout this period was the democratization of the production processes, which led to the democratization of the political processes and these, in turn, to new legislation; among them, and of paramount importance, the legislation on private property. But the legislation on private property is a consequence of a political democracy sponsored by the democratization of the productive conditions.

North[151] states that the second economic revolution produced the neoclassical world, characterized by technological expansion that opposed the classical Malthusian view. North is right; the surprising thing about capitalism is that it has not succumbed to Malthusian pressures. But the question we must ask ourselves is: What is it that allowed this second economic revolution, characterized by mass production like never before in history? North's answer is innovation stimulated by the incentive giv-

[151] North, D.C. (1981): *Structure and Change in Economic History,* W.W. Norton, New York

en to the individuals by private property. To us, North's overemphasis on this factor is misguided. It is indisputable that individual selfishness is one of the engines of capitalism and, therefore, it is understandable that an adequate structure of property rights is necessary to allow the individual forces of selfishness to support development. However, there are other factors of great importance that have been left out by North, some of which are even more fundamental than the structure of private property, in the sense that they precede it and to a large extent explain its emergence.

The central engine of capitalism is the acceleration of technological change associated with large-scale consumption. This was made possible in principle by the commercial expansion with Asia and America, but later what sustained this technological growth was the growth in the consumption of the middle classes. What distinguishes capitalism from other historical periods is that the initial expansion, product of growing trade, was not stopped, as in the case of Alexandria and Rome, by the rising administrative costs of the empire. Western empires, in contrast to previous empires, enjoyed an endogenous engine of growth of their own: the consumption of the middle class not only of their own empire but of Europe in general and of America. The new phenomenon in capitalism is the enormous expansion of an endogenous market, which is a direct product of the expansion of the middle class.

Pre-capitalist history is basically Malthusian, for the expansion of technological development, brought about by the expansion of trade, was often held back by the costs of maintaining an empire that would provide the order necessary for commercial expansion. Pre-capitalist trade was limited to exchange between wealthy classes, or to the looting of resources from other societies; in any case, marketable consumption was small in relation to the overall economy of the society. The expansion of the middle class increases the size of what is endogenously tradable and generates a technological development not previously seen. What characterized the second economic revolution was mass production, a consequence of the great expansion of the middle class because of democracy. Democracy restricts the interests of the powerful classes and aligns them with social interests, creates the welfare state, maintains the consumption capacity of the middle class, expands the endogenous market of the West, and allows mass production, which requires the development of new energy sources; in this way, the massive consumption of the middle class sponsors technological development, and this guides science's ex-

pansion.

The democratizing productive process frees the individual and fosters democracy, and this generates the conditions of the New World. The free humans unleash their creativity in technology, in science and in other fields. The social energy of this new world is unprecedented. The phenomenon is complex and has many causes and consequences that are difficult to isolate and to distinguish one from the other. But without failing to recognize that the phenomenon of capitalist expansion is multifactorial, it is necessary to emphasize that the importance of mass consumption by the middle class in this process has been underestimated. In the preceding paragraph, we have emphasized the individual consumer, rather than the traditional emphasis of economists on the individual producer. In this vision of the individual consumer, the dynamics of capitalism is given by the dynamic preferences of the consumers of a growing middle class, which allows mass production and accelerated technological change guided by the dynamic preferences of such middle class.

Note that, from this point of view, the main force of change is not the individual innovation in the production process, but the social innovation in the structure of the consumption of the society. This would explain why the Soviet Union found it difficult to imitate capitalism, since it lacked the dynamism provided by the changing preferences of the middle class. The Soviet Union was neither scientifically nor technologically backward; its problem was that it did not grow adequately because it lacked the growth engine of the middle class of Western capitalism. The Soviet effort to produce was concentrated on saving, on military expansion, on scientific and technological innovation, and disregarded the income and consumption expenditure of the middle class and, therefore, lacked an endogenous motor of growth; due to this, like all ancient empires, it succumbed to its administrative costs of expansion (see next chapter)[152].

Throughout the previous paragraph, we have emphasized the mass consumption of the middle classes; and we wish to reiterate that this phenomenon is a consequence of a political democracy generated by the original democratization of the productive process. The democratization of the productive process (as it had happened in Greece before) generated the economic and political power of the middle class, which was later consolidated via democracy. In this way, democracy is the consequence of a previous consolidation of the economic and political power of the middle class. When democracy is formally superimposed on societies

[152] Obregón, C. (1997): *Capitalismo hacia el tercer milenio,* Nueva Imagen, México. pp. 127-137.

which have not developed a middle class in their own historical process, the informal historical institutions do not relate to the democratic phenomenon and democracy does not work well.

In a fundamental sense, the historical phenomenon of the West must be understood from its roots; the basic change of capitalism was democracy, and not a formal imposed democracy, but one sponsored by the early democratization of the production process. For this reason, as North indicates, the informal institutions coincided with the formal ones. This had several consequences, property rights legislation being just one of them. The consumption of the middle classes is another key consequence. The expansion of scientific knowledge is one more, and we could go on, but the basic point is that it is inappropriate to prioritize only one of them. The development of the West is a multifactorial phenomenon.

The whole point of our criticism of North, is that North makes one of the causes or symptoms of capitalist expansion in the West into "the cause", and this, in our opinion, is simply indefensible. What emerged with capitalism is a new world, with a differentiated individual, with an expanding middle class, with accelerated technological change and a renewed scientific spirit. This new active and creative human, being differentiated, requires legal frameworks that protect and define private property, but it is unjustified to make property incentives the basic axis of the history of capitalism, particularly when capitalism is born from societies where the individual was not yet well differentiated. What makes capitalist expansion powerful is not just individual selfishness and creativity, but communal strength to restrain the interests of the powerful classes and to stimulate the middle-class consumption.

The history of the West has been described to us as the history of the individual and of capitalism; and as a great break with the past, in which the individual was not yet differentiated. But the history of the West must also be seen as the triumph of democracy, the community, and popular rights. In a sense, it is not the capitalists who created capitalism, but the middle class who, through democracy, restricted the capitalists' luxury consumption and force them to save; it is not the productive creativity of profit-seeking capitalists that drives the expansion of the West, but the shifting dynamics of middle-class' preferences that fuel technological change and economic growth.

North's vision of the history of Western capitalism (with the individual's innovation as the agent of change, motivated by the incentive of the appropriate structure of property rights) is transferred by North to his

account of world history. The first point to make is: that North[153] only explains world history as the history of the West; there is no attempt to incorporate, say, the contemporary histories of China or Japan, for which it would be virtually impossible to use North's differentiated individual. Japanese society, even today, resists its interpretation through the lenses of individualism. Japan's economic success after World War II is based on the communal strength of the Japanese society and not on the individual incentivized by North's private property rights [154].

The central problem with North's view of history is that it is based on a West, non-West, binomial, so that underdevelopment is automatically defined as the non-West. The alternative to North is to understand the history of the West as consequence of its unique position and its global historical characteristics at a given moment. Changes in the property regime are important, as are other factors, but they cannot be defined as "the cause" of development, as North does. In Asia, with institutions distinct to the Western ones, some Asian countries benefited from the post-war commercial expansion and some of them have even managed to become developed countries. But they did it based on their own institutional strengths, and not based on North's property regime that incentivizes individual innovative behavior.

What worked for the West was not just individual property rights, but the consonance of many factors. Development is a multifactorial process and does not happen only in one way. Asia developed also with a multifactorial mix, but one very different from the one of the West The only commonalities between both experiences are. 1) the use of global frontier technology; and 2) the effective use of pre-existing historical informal institutions – but such institutions were very distinct in both cases

There is an inherent contradiction in North's thinking: on the one hand, the individual is the innovative agent of change; on the other, positive transaction costs necessitate corporate growth in many economic sectors. In today's West, technological change is increasingly being carried out by corporations. The foregoing does not deny the importance of individual creativity, nor does it deny that an adequate system of incentives contributes to raising productivity in the West, but it does clearly indicate that individual creativity is not the only social force for change, nor is it the predominant one. Technological innovation in Japan and Korea was driven almost exclusively by large corporations.

[153] North, 1981., op. cit.

[154] Ibid. pp. 67-81.

North's analysis obscures two problems that require our attention. The first is the relationship between globalization and underdevelopment, and the second is the visualization of development as a process of incorporating marginal changes into institutional structures that may differ from the Western's ones. North leaves us with the impression that underdevelopment is due to the absence of ideal institutions; however, as Asia has shown, even without these ideal institutions, economic growth can be very fast.

North's contribution as to the resilience of informal institutions makes it possible to explain why in certain cases the export of Western institutions to underdeveloped countries does not work well (this is the historical example of India, Latin America, and the ex-USSR 1990-2000), and this was a great contribution. But what North does not explain are the strengths that these informal institutions may have; when they are mixed with heterodox formal institutions they can give rise to economic success stories like those of China, other countries in Asia, and even recently India itself. Rodrik represents an advance over North in that he recognizes the importance of strong domestic institutions in stimulating economic growth, but there is still in Rodrik the insistence on seeing the institutions of other countries as in transition to the optimal institutions, which are the Western ones, and to explain the success stories based on Western like institutions, i.e., respect for private property or democracy[155].

The reality is that successful Asian countries have developed for the most part without democracy; and that in China respect for individual rights is very low, and of course there is no democracy. These societies are competitors of the West, not its followers; they have adopted from the West the minimum necessary to integrate globally and compete, but basically, they continue to be societies with values different from the West. Openly analyzing these different conceptual systems and their corresponding institutional arrangements is relevant and changes our way to understand the problem of underdevelopment. This will be one of the key topics in the next chapter. And as we will see, to understand why these Asian countries have been successful forces us to develop a novel understanding of institutionalism, different from NIE, that we have called comprehensive institutionalism (CI). The discussion of the characteristics of CI and its relationship with Veblen's proposals will be presented in the next chapter.[156]

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[155] Rodrik's proposals are presented at greater length in Obregon, C. 2008. *Institucionalismo y desarrollo*.Amazon.com Research gate.com.

[156] Obregon, C. *Teorias del desarrollo economico*., op. cit; and Obregon. *Institucionalismo y desarrollo*., op. cit.

CHAPTER FOUR: SOCIAL CHOICES AND COMPREHENSIVE INSTITUTIONALISM

Social choices necessarily involve institutions, therefore the question of which social choices should be taken by institutions themselves, and which ones should involve aggregating the individuals' preferences + values is critical, in the understanding that any aggregating method of individuals' preferences + values necessarily also involve the institutions. This critical question will be further explored in this and the following chapters.

In the last chapter we saw how NIE describes how institutions participate or define social choices. In this chapter we present comprehensive institutionalism (CI), and we show that institutional social choices are more extensive than what NIE have considered. In the first section of this chapter, we present what comprehensive institutionalism (CI) is all about and how it relates to social choices, and in the second section we sketch a CI's new growth theory, which emphasizes the importance of non-individualistic based social choices

COMPREHENSIVE INSTITUTIONALISM (CI)

CI is a comprehensive scientific exercise based in the following premises: 1) It distinguishes between science and ideology, and it is based only in scientific knowledge; 2) it integrates the scientific knowledge in diverse social sciences, such as economics, sociology, cognitive psychology, social psychology, linguistics, and anthropology, with other sciences such as evolutionary biology and neurobiology; 3) it contemplates the social relation between the individual and the society from the perspective of all the scientific disciplines previously mentioned; and 4) it includes institutions without denying the relevance of individualism in Western history[157].

[157] For a more detailed description of CI see Obregon, C. 2023., Institutionalism Versus Liberalism. Amazon.com Research gate.com.

CI starts with the distinction between science and ideology. Ideology is based in philosophical preconceptions that can never be shown false; versus scientific knowledge that can be shown false. There are several possible scientific models of the "same given reality" which may allow learning from it, such as the distinct notions of time of Newton (time is absolute) and Einstein (time is relative and it is a geometrical dimension); but what they have in common is that they can be shown to be false. Science can never know reality itself; it is based in distinct partial models of reality. Nor aided by science, nor alone can the human mind know reality itself. Contemporary neurobiology has taught us that the human mind learns through images of reality (neuronal maps) which are built based upon the information received by the human senses. Imagination combines different images of reality, but none of these images, neither their combination, is a reproduction of reality itself. Humans' mental images are based in external cues perceived through the human senses and selected emotionally. Emotions are nothing else that survival evolutionary learned patterns of interaction with reality. Emotions preselect the external cues, received through the human senses, or other technical or scientific artifacts, that will be store as neuronal maps (images). And reason works in these already emotionally preselected partial images of reality. They are partial images for two reasons: 1) because they are based on the limits that the human senses, or the human senses aided by technical-scientific artifacts, allow humans to perceive; and 2) they are already emotionally preselected. The process of image formation in humans and other advanced mammals is very similar, except for three facts: 1) Other mammals have different degrees of advance in distinct senses than humans. Sharks for example do not see well but have a much better smelling sense than humans. Thus, while for us a small fish may be defined by its size and its colors, by the shark it may be defined by its smell; 2) humans have advanced technical-scientific artifacts that aid them in their perception of reality; 3) humans' syntactic language (which no other animal has) allows for significant more combinations of images; thus, humans possess a more abstract imagination that allow them, among other abstraction differences, to develop the notion of an extended time.

CI sustains that distinct scientific models of reality can be made compatible if we strip them from their ideological preconceptions. Each one of these models may be particularly relevant to understand a specific set of social problems. For example, despite the failure of diverse schools to fully explain the economic equilibrium as an outcome only of the interaction

between diverse individual economic agents; each of the individualistic scientific models ended up having important contributions. Neoclassical economics established the models to understand how a market works; and has been extremely useful nor only for price theory, but also for many other theoretical problems in economics and in finances. Whether in international economics, in the theory of the consumption function, in portfolio theory, or in public finances, among many other areas, the neoclassical model is a fundamental base. In finances, asset management, derivatives, and corporate finances have developed in the light of the neoclassical model. Moreover, the neoclassical model of general equilibrium and welfare economics was the theoretical base for the development of solid results in SCT, information economics, game theory, NIE, and behavioral economics. Sen's economics has changed the way we conceptualize poverty and development. It has created the capabilities approach; and his theoretical frame is behind the Millennium Goals of the United Nations, the HDI (Human Development Index), and the measurement of multidimensional poverty. Sen's capability theory has and will continue contributing to the creation of a better global world. And Behavioral economics has made us aware of the importance of emotions in economics, has been useful to better understand some economic decisions, and has allow the implementation of better policies in cases such as Save More Tomorrow; Presumed Consent for Organ Donation; Disclosure of the Main Emitters of Pollution; and many more[158]. Behavioral economics will continue illuminating economic policy decisions from a different perspective, and therefore it is highly useful. All these contributions, as it will be explained, are compatible between them and must become part of a scientific CI.

Therefore, the question is not which social theory best represents reality, but for which specific set of social problems each one of the scientific models is relevant.

The question of agency has become central to modern economics and other social sciences. Yet, we will argue that it is only relevant to understand the Western culture and its influence. This is a critical issue because it is often assumed that the existence of the agency is an essential problem in social sciences, yet as Veblen argued the agent in the sense understood in the West is only a cultural feature of the Western society. This point as we will see turns out to be critical as to how social sciences are developed. If we start from the individual-agent then the question is how social order

[158] Obregon, C. 2018. *Beyond Behavioral Economics*. Amazon.com Research gate.com.

is achieved out of the values, beliefs, preferences, choices, and actions of such individual-agents; but as we have seen it turns out that such social order is characterized by multiple equilibria and there are only two solutions: external essential values, or institutions. Since, we do not have access to such external essential values neither by the human brain alone, nor aided by science it follows that the equilibria chosen would be necessarily partially defined by the institutions.

But does the individual- agent exist independent of the institutions? The evolutionary answer is that the individual-agent is a product of the institutions. This was the critical contribution of Veblen that has not been fully understood. That does not mean that individuals do not exist independent of institutions, individuality is a fact of evolution; but the individual social agency assumed in the Western individual-agent is a product of Western's historical institutions.

SI has documented the decisive influence of institutions on individual-agent decisions, HI has shown that institutional changes are constrained by its path dependency that limits the range in which individual-agent decisions may influence the institutional changes, and EI has argued that there are environmental and physical conditions that define the range of social choices that can be chosen and that economics should learn from evolutionary biology; but none of these schools has understood well what Veblen's key contribution was. The point is that in non-Western cultures, in the previous history of the West, and in the history of the world seen as one culture, social choices cannot be defined starting from the individual-agent.

It is not a question of whether the individual is selfish and rational as in neoclassical economics, or irrational altruistic and cooperative like in behavioral economics, or rational and ethical like in Sen's economics – no matter which assumption is taken it would be necessarily misleading, because to understand how social choices are taken, how social order is accomplished, and how social change occurs one needs to star by the evolutionary understanding that: humans were born as social beings. They already inherited from their evolutionary predecessors a social institutional arrangement, and therefore have never existed as isolated individuals taken decisions. RCI and NIE both have the correct methodology to understand the role of the individual-agent in the Western culture (and in the influence of this culture in others), and they have been very successful. But even to fully understand the West, one needs to start by realizing that the agency of the individual in the West is a social concession con-

sequence of a particular social history. Even in the West, the individual agency only covers certain aspect of the social life. An aspect which has become no doubt critical, but that do not explain many other features of social life that are also extremely relevant.

Paradoxically, it is precisely in the last seventy years, that in parallel with the theoretical success of individualism (through the formalization of neoclassical economics, the success of rational expectations, and the development of RCI), Western governments and social expenditures have grown as never before in history. Today in the West governments manage and take social choices for around forty percent of the annual richness produced (the GDP). Clearly institutional social choices, that do not depend directly upon individual-agency, are of the utmost importance, even in the West.

The CI proposed in here understands that is extremely important to study the individual-agency in the Western culture, and the possible role that it could have in other cultures. As we have seen, capitalism fast growth would not have happened without the expansion of the private markets and the efficiency with which they transmit the information of the fats changing preferences of the middle class. And in this sense, CI welcomes the contributions of neoclassical economics, RCI and NIE. But all these schools have only described the economic relation between an individual-agent and the society in the West. However, even in the West the individual agent has other non-economic relations with the society. Boulding has described the individuals-society relationship as happening in three social systems: the economic, the integrative and the power one. Thus, even for the West the social universe is much more complex than how it is contemplated by the previously mentioned schools. The individual-agent relates to society through the three systems, and in each one of these systems there are institutions and social choices are taken. Neoclassical economics has explored with detail the relationship between an individual-agent and the society in a Western society in the economic system, RCI has opened the discussion of the existence of institutions in this relation, and NIE has explained why institutions are required and what institutions are needed, all these schools represent important contributions that should not be underestimated. But they all work within one of the three systems mentioned by Boulding, and only in relation to the Western society. But none of these three systems works independent of the others. Think for example today how the power system in the Russian- Ukraine war has affected all the world economies. And one of the

reasons, among others, why the war started was a failure of the integrative system, inside Ukraine, between Ukraine and Russia, and between Russia and the West[159].

We are getting ahead of ourselves in here, but the point to be made is that each one of the scientific contributions of neoclassical economics, RCI and NIE must be understood for what it is – its contributions must be acknowledge and its limitations must be pointed out. We must avoid two mistakes. The first one is to generalize the findings of any school beyond the area in which they are applicable. The second one is to underappreciate their importance because they are not relevant for other relevant social areas. The task of CI, proposed in here, is not to claim that neoclassical economics, RCI or NIE do not work, not to replace them. We find the discussions as to what explains better human nature, neoclassical economics, or behavioral economics, on one side, and neoclassical economics, or Sen's economics, in the other, quite irrelevant. As Veblen already anticipated, there is not a given human nature. Just as there is not one unique relation between the individual-agent and the society that we must study. Even the same individual-human in a specific society behave different in each one of the three systems mentioned. And while certain institutional environments impose similar behavior in all the individuals, in most other cases individuals behave differently in the same environment. Moreover, individuals' behavior differs between cultures, historical times, and even the age or sex of the individual. All we can do in social science is to explore some commonalities that remain true under certain social conditions, with the hope to establish a positive feedback loop with social reality, in particular issues, to be able to influence on a define culture, in a given historical time. The irrational altruistic human of behavioral economics is not an alternative to the rational selfish human of neoclassical economics, but a complement. In large economic markets humans behave like in neoclassical theory, while in other cases under the influence of the integrative system they may behave irrational and altruistic. Behavioral economics has shown its applicability in a subset of economic problems, but it is not at all a substitute for neoclassical economics. The ethical human of Sen is also not an alternative for the selfish rational human of neoclassical economics. Sen's ethical human interrelates with the integrative system, and Sen's economics has been particularly useful in studying and understanding poverty. Sen's economics is also a complement of neoclassical economics. And the three, neoclassi-

[159] Obregon, C. 2022. *The Economics of Global Peace*. Amazon.com. Research gate.com.

cal economics, Sen's economics and behavioral economics operate within the frame of the Western culture; although, Sen somewhat interrelates with other cultures. Again, CI does not pretend to substitute behavioral economics or Sen's economics; its goal is to provide a framework that delimits each one of these schools' contributions within a more general view of the relationship between the individual and the society. And in this case the individual does not refer to the Western individual-agent, but to a physical individual, that is, due to evolutionary reasons, a different biological entity than the society. The new frame of the individual-society relationship, that is proposed in CI, is based on scientific knowledge from different sciences, and is applicable to diverse societies and distinct historical times. CI, however, is more than just a general frame to place different social and economic theories; it is a new institutional theory of social sciences that provides interesting new results as to how understand and confront key social problems and choices of our times.

Why do we need a comprehensive view of the relationship between the individual and the society? Because the relationship between the individual and the society goes well beyond an economic relation, and therefore the economic relation must be placed in the perspective of what we know of the relationship between the individual and the society in other disciplines such as evolutionary biology, neurobiology, contemporary psychology, anthropology, and other sciences.

CI does not pretend to create a new evolutionary economics capable to substitute neoclassical economics, RCI, NIE, behavioral economics, or Sen's economics. It does not pretend either to borrow new terms or theories from evolutionary theory to transplant them to economics. CI is evolutionary because it uses the knowledge of evolutionary biology and evolutionary linguistics. But CI uses this knowledge along the knowledge from other scientific disciplines such as neurobiology and psychology. CI uses contemporary psychology, but not to create a new economics based upon psychological considerations as behavioral economic attempted, but to explore other social relations in the integrative and power systems that may be of interest in defining whether a particular finding in economics is relevant or not in a specific given institutional environment.

NIE has been heavily influenced by the Western individualism and, following Commons, has develop a theory of the institutions based in the rational bounded innovative optimizer individual incentivized by institutions that protect his/her private property. But as we have seen in the last chapter: NIE is insufficient to explain the success of the Asian growth

model; NIE is not a full explanation of the Western model, because it leaves out the key role of the growing middle class in capitalism; NIE does not have an adequate theory of institutional development in other cultures; and NIE is not an appropriate theory to understand the whole history of the world seen as one culture. While it is important to renew the need to understand what institutions are and how they relate to social choices, NIE is only a partial solution; we need a more extensive theory.

Veblen was in the right track when he pointed out that the Western free individual was a historical outcome of a specific historical time; and he was also in the right track by suggesting that economics must integrate itself with evolutionary theory and other social sciences. But even Veblen was too much Western centered in his description of the historical stages. Recently there has been an attempt to rescue Veblen, by Hodgson and others and to create an evolutionary economics[160]. Such an attempt however does not go in the right direction, because the main goal should not be to transplant concepts from evolutionary theory (or other sciences) to economics[161]; but to understand economics in the context of the scientific discoveries of evolutionary theory and other sciences. Economics was born to understand specific problems of the Western economies such as economic growth and the transmission of information through the price system. It assumes the institutional arrangement of the West and has been a highly successful science. But, as already mentioned, we must be very careful not to make one of two mistakes: a) disregard neoclassical and classical economics because they are not useful to understand other institutional arrangements – or other social problems not well studied by these schools; b) trying to generalize economic results based upon the West's historical institutional arrangement to other cultures with distinct historical institutional arrangements – or to other human problems (whether in the West or not) not well described by economics.

It is not a question of discussing which is a more critical determinant of social choices and social changes: institutions (like SI suggests) or individual agency (as RCI defends). Or discussing whether path dependency is dominant as HI suggests, or social engineering can be powerful enough

[160] Hodgson, G.M. (2004): *The Evolution of Institutional Economics,* Routledge, London/New York.

[161] This eventually may be useful just like concepts from physics or mathematical game theory have ended up being highly useful, but these efforts are just part of the normal development of a science and should not be confused with the task of placing economics in its corresponding place in the broader context of what we know about human beings in evolutionary biology, neurobiology, and other social sciences.

to break such path dependency. What must be done is more complex.

Individual agency has been particularly key in Western history, and the role of free markets and private property must be fully understood, and the neoclassical contributions on price theory turns out to be key in this understanding. But the world seen as one culture, and other non-Western cultures, have not developed based upon a strong individual agency, but mostly as an outcome of historical institutions, as HI has suggested. However, in certain cases there has been more room for social engineering that HI concedes. China, Japan, Singapore, and other successful Asian countries have made social choices that drastically changed their historical paths – and they did it relatively quick – in around twenty years average. Moreover, Bretton Woods showed that world's institutional design by global leaders, through the correct social choices, is possible. And even the Western countries have drastically modified their institutional arrangements after the Second World War – with large governments and large social expenditures. All these changes of course are not just the outcome of intentional social choices (social engineering), but also of historical forces at hand. But the point is that drastic changes are possible, and that human beings do influence their future. Although, social choices are not, most often, consequence of aggregating individual preferences + values, but the outcome of critical leaders' decisions.

Neither the world at large, nor the successful Asian countries, nor other non-western countries would ever look like the West, each one of these entities has its own institutional history. A history, that constrains and defines the way social choices are decided, and the likely and possible future paths that will be taken. There is ample room for social engineering, but only up to a point. Japan, that was under American control and influence, has never become truly Western. India, despite the heavy English influence, remains quite distinct to the UK. The West will not change other historical entities to become like the West, because they have not had the West's history.

Think in the world like one historical entity, and it is easy to quickly realize that it will never become like the West – there are not any basis to expect, for example, a global democracy. Social engineering (social choices) does work, and fast and deep social transformations are possible, but under the constrains given by the historical institutional arrangement.

NIE has already shown that the combination of several approaches can be fruitful. North uses RCI to maintain the relevance of the individual-agent (which is particularly relevant in the West's history), he uses SI

to argue the decisive influence that informal institutions have, and HI to explain the resilience of the informal system. CI proposes a more extensive institutional theory, that incorporates the scientific contributions of all the schools already mentioned: classical and neoclassical economics, behavioral economics, Sen's economics, RCI, SI, HI, EI, and NIE with the scientific knowledge acquire in other disciplines such as evolutionary biology, neurobiology, contemporary psychology, anthropology, and others. The first critical contribution of CI is that it allows to differentiate ideological idealist proposals in each one of these schools from their true scientific proposals. CI argues that the scientific proposals of these various schools, once devoid of their ideological preconceptions, are complementary to each other; and that large part of the discussion amongst them is due to their ideological differences, that must be excluded from the discussion. The view of the social world that emerges with CI is quite distinct than the one proposed by radical liberalism or radical institutionalism (Marxism); and it allow us to understand the true causes of most of the key social problems of the world today, and what social choices are available for its resolution.

The purpose of CI, using other sciences, is to provide a more extensive institutional theory that allow us to place each one of socio-economic schools' contributions in its right place - as to what their true scientific contributions are. CI does not, should not, and will not, enter the discussion of choosing one scientific model over the other based on whether it describes better or not the true human social nature. There is not such a true human social nature that we can apprehend with our minds, or with our scientific methods.

In what follows, we will highlight the main characteristics that a more extensive institutional theory (the CI proposed) must have, and we will insists that the key feature is that it should be able to integrate the scientific contributions of neoclassical economics and the other schools mentioned in previous paragraphs, while being able to place them in their specific relevant social and historical context, and in the context of what we know of human beings in evolutionary biology, neurobiology and other social sciences. Such an extensive institutional theory while being able to explain the Western history and the West's historical alternatives today, should also be able to do the same for non-Western cultures, and for the world at large seen as one culture.

What has CI learned from Evolutionary Biology, Anthropology and Linguistics?

Evolutionary biology accomplishes a key role whenever we wish to distinguish between ideological preconceptions in economics and true scientific findings. Evolutionary biology provides us with four critical lessons, from the point of view of our interests in here. First, humans were evolutionarily designed from the beginning to be social beings, the isolated decision maker has never existed in any society, and it is only an abstraction in a specific model. Second, humans were evolutionarily made to belong to their surroundings, that is they have the evolutionary capacity to relate to those near to them, to a social group and to the biological and physical universe surrounding them. Third, the existence of individuals is an evolutionary fact required to maximize the survival chances of life itself (by diversifying the genetic pool). Therefore, there must be always some degree of conflict between the individual and the society – a conflict that is resolved through social institutions (including a sophisticated language), that is why social choices always involve institutions. Fourth, we were originally designed to belong to small groups, which became larger due to technological advancements and the development of a sophisticated language. Therefore, there is always potential conflict between diverse small groups which may or not be resolved through institutional social choices.

These four conclusions are critical to understand Veblen's main contribution – that there is not an essential nature of humans. The individual-agent as conceived by the West is not our human nature, but the outcome of a particular historical time of the West – it is a social concession. And this individual agency only operates in certain areas of the social life. Social order as the consequence of isolated individual choices, values, and actions is just an assumption in a model that does not relate to any historical reality. Individualism understood as the presumption that private free markets will deliver social stability, peace, progress, and justice, is an ideological proposal of RL, that contradicts evolutionary scientific evidence. Therefore, even in the West social order cannot be explained only from isolated individual choices, values, or actions. And Marx's conviction that humans' true essential nature is to become a "species being", is not validated by the study of evolution. Humans' life has change through evolution, but from the beginning, even with our ancestors, there was conflict between the individual and the group, and between distinct small groups. As groups became larger, eventually nations were

formed, and since then there has been a degree of conflict between them. The international humanistic communist society, satisfying human's true nature as "species being", is just an ideological proposal of RI.

What from the standpoint of the history of the universe is an insignificant change on a very small planet called earth; from the point of view of life, it results in large biological adaptations that, lead to the disappearance of some species and the emergence of others. The fundamental condition for the existence of life is its adaptability to the material universe that precedes it. When the earth changes, life must adapt to survive; and such adaption is neither superior nor inferior to a previous adaptation: it is just different, it is context dependent. There is no specific direction in the biological evolution, except that the constant change is what characterizes it, the proliferation of new forms of life. In this change, there is no sense of progress; it simply consists of adaptive improvements, related to a given specific context. Live survival logic explains most of what we are. Who are we? An outcome by chance of the evolutionary process. Where do we come from? From a common ancestor with the Chimpanzee. Where are we going? To continue evolving. Why are we individuals? To maximize the diversification in the genetic pool of the human species, to increase its chance of survival to future unknown material changes. Why are we born? and why do we die? Because surviving individuals must inherit their genetic characteristics, to improve the adaptive qualities of the genetic pool of the specie. Why we have distinct sexes? And why are we attracted to each other? Because sexual reproduction diversifies the genetic pool. Why are our bodies so perfect for certain tasks, and why our brains evolve to be so large? Because of natural selection. Why are we social beings? Because it increases our survival chances through several routes. Social groups can defend themselves better from predators. A social group is more productive. A social group is needed to take proper care of newborn babies. And the social group was the key for certain key evolutionary characteristics, like being erected, having a large brain or develop a syntactic language.

The distinguishing characteristics of human being are basically five. The first is his ability - and necessity - to develop an enlarged social life, which involves the capacities to: imitate others, understand their minds, and regulate emotions. The second is the size of his brain and, above all, his capacity for abstract sophisticated thoughts. The third is technological development. The fourth is his - significantly developed - cognitive ability. And the fifth, and last, is a sophisticated syntactic language. These

characteristics interrelate and reinforce each other. The advanced syntactic language is of social origin, and it gives human beings the ability to have an autobiographical self-conception, which allows his vision of a past and future extended. The development of cortical brain, and the ability of sophisticated abstraction that it entails, allow humans - through the syntactic language – to imagine and create complex abstract representations of reality. Thus, the notion of extended time in humans is a result of their capacity for sophisticated abstractions due to a syntactic language that has a social origin. Therefore: syntactic language, extended time, and social life are closely related; and are not understandable independently of each other.

From the point of view of our interest here it must be emphasized that we were from the beginning social beings, even our oldest ancestors seven million years ago were already social beings, chimpanzees are social beings, what distinguish the hominids is even further social life, and what distinguish the Homo sapiens from other hominids is again more intense social life. The isolated individual never existed, it is an abstract assumption that may result useful in an economic model to explore certain theoretical relations, but it never existed in real societies. Individuals were always social beings, and the social dynamics was always from the group to the individual, which does not deny the fact that individuals always existed as a physical reality, but the survival of the group has always had, evolutionary speaking, priority over the individual's survival.

The process by which the humans' mind knows the external world is like the one in many animals. Animals also imagine. Experiment with rats show that they can store abstract images, and to use them for their decision making[162]. And a BBC documentary shows how a shark decides to hide all night in a cave to prey on walruses when they go into the sea in the morning[163]. Demonstrating that animals are also capable of planning. Animals imagine and make decisions that, involve both abstract images and a sense of time. For those decisions animals, as humans do, reproduce images stored as neural maps.

Our brain and thought process is of animal heritage; but the human syntactic language is significantly more sophisticated than the language of the rest of the animals. The complexity of human syntactic language allows the use of images in an extended time; unlike animals, whose decisions and images have limited temporality. Humans are the only ones

[162] Obregon, Carlos. The Philosophy of Belonging., op. cit.

[163] Ibid.

with an autobiographical consciousness of themselves, which allows a historical view of the past and, therefore, a projection of the consequence of their decisions into the distant future. Autobiographical memory started with a proto human language and was developed and perfected with the syntactic language. The syntactic language identifies images with specific words that have contextual meaning; and it increases by far the mental ability to create new images, new combinatorial orders of the images initially saved.

Economics is not and cannot become an evolutionary science if by this it is understood creating a new economics based in evolutionary principles and knowledge. However, evolutionary biology provides important critical scientific information about the evolution of humas which is highly useful in our quest to develop a CI capable to provide a general institutional explanation of the relationship between the individual and the society. We learn that humans have always been social beings, that even our ancestors were social beings and that what distinguishes the Homo sapiens from other hominids is precisely a more intense social life. The larger human brain cannot exit the mothers' womb fully grown; therefore, the child needs maternal attention the first years, which requires social life. We also learn that evolutionary speaking the human brain size correspond to life in groups of around one hundred individuals[164]. And that genetic diversity requires for us to be individuals which need to be born and to die. Since we are born, we are evolutionarily prepared to relate to the outside world – to belong. In other works, I have described three ways of belonging that are required for survival, and which will be further explain below. Love which is the belonging relationship with the mother or care giver and those very near to us, social significance which is the relation with the social group, and existential significance which is the belonging relation with the physical and biological universe that surround us. Thus, the individual belongs to the social group, and therefore, the social group's survival has priority over the individual's survival, which does not mean that the latter is not important. The abstraction of an isolated individual whose rational choices, preferences and values define social order and social change, may be relevant for a particular model, but clearly does not correspond to evolutionary reality. Neither the philosophical presumption of a humans as a "species being" has any support in evolutionary biology. Individuals in addition to belonging,

[164] Dunbar, RIM (1992), "Neocortex size as constrain of group size in primates", *Journal of Human Evolution,* Vol. 22, pp. 469-493.

require individual instincts of survival, thus there is always existential tension between the individual and others. We were evolutionary design to belong to small groups with which we are tied emotionally, larger groups go beyond our original evolutionary design, and there is therefore always tension between small groups and the larger group that they conform. Moreover, there is always tension and potential conflict between larger groups belonging to distinct conceptual systems and institutional arrangements.

What has CI learned From Psychology and Neurobiology?

The most recent attempt to integrate economics and psychology has been made by Behavioral Economics (BE) – which produce Nobel prize winners in economics. But, while for certain specific problems BE's contributions are undeniable; BE is far from being a general framework to understand a psychological human in a broad sense that can be used to build CI. The main limitation of BE is that it does not have a theory of society and of the way institutions evolve, and therefore it cannot carefully describe the different responses of individuals in diverse institutional environments. While it is true that under laboratory settings (like the dictator game), and in certain conditions in real life, individuals may behave irrational, altruistic, and cooperative, it is also true that in other circumstances, like in large economic markets, they clearly behave rational and selfish. The extremely low international aid from Western nations to poor countries clearly do not show the altruistic individual of the dictator game, but a selfish individual. Therefore, to be able to explain the diverse behavior of individuals in distinct institutional settings, CI needs to look for a broader view of the psychological human than the one that behavioral economics holds. This broader view is offered by belonging psychology, which uses advance cognitive psychology. Belonging psychology has the virtue that relates to the evolutionary nature of humans.

Bowlby, influenced by the work in ethology of Lorenz, discusses the instinct of belonging (attachment in Bowlby's words, I have named it belonging to recognize the fact that in humans it always involves emotions). And even though Bowlby improperly underestimates the Freudian instincts of sex and aggression, the fact is that the instinct of belonging directs and conditions the Freudian instincts towards adequate social life.

Therefore, these instincts are not autonomous as Freud thought. From this point of view, Freud observed patients who were belonging failures. Bowlby, based on studies of artificial intelligence, modify the schema of child mental work of Piaget, and replaces it with the internal working model he proposes, which unlike Piaget's has a central emotional content. The contemporary neurobiology and the empirical studies of the psychology of belonging show that Bowlby was right. In its contemporary versions the psychology of belonging is consistent with the most recent advances in cognitive learning theory; but has the great advantage of being also compatible with both an evolutionary view of human nature and with recent neurobiological findings.

Human beings are not biological determined as it was originally thought by Freud and Piaget, the inherited genetics only work as it should if the interaction with the environment is the appropriate. The ego is consequence of natural biological survival instincts that guide the individual behavior towards survival; however, these instincts guidance may fail. The interaction with the environment is decisive to define the future behavior of the individual. However, Skinner was also wrong, the environment is not as decisive as he thought. There is an individual ego that develops because of both genetic tendencies and environmental experiences; and once the ego develops it interacts with the environment in an individual way. Therefore, the ego is not as manipulative as Skinner thought. Cognitive Psychology has shown how is that this ego learns. And belonging psychology has taught us that whether the adults' personality is secure or insecure relates to the emotional belonging quality of the relationship with the mother, or care giver, the first twelve months. Thus, there is a complex interaction between individual inherited genetic characteristics, survival instincts and environmental conditions that give rise to an individual ego, which once it develops interacts with the environment in a distinct unique way. Thus, individual history and particular genetic characteristics relate to the way in which the individual reacts to a specific external stimulus. Some individuals, the secure ones, will have more potential freedom in choosing their behavior than others.

For Bowlby[165], attachment is a biological imperative of evolution. The infant has instincts that guide him to find a figure to attach, seeks to ensure the continued availability of his/her care giver. Bowlby proposed

[165] Bowlby 1969, 1973 and 1980. Bowlby, J. (1969) *Attachment and Loss, Vol. 1. Attachment. New York: Basic Books. (1973) Attachment and Loss, Vol. 2. Separation and Anger, New York, Basic Books. (1980) Attachment and Loss, Vol. 3 Sadness and Depression, New York, Basic Books.*

that the way in which parents treat children is critical to explain their development; the proposal would be empirically verified by Ainsworth.

Bowlby was influenced by Piaget's learning theory which explains that the baby, playing with what surrounds him (i.e., exercising his freedom of movement) develops a relationship of cause and effect *versus* the environment, and this is recorded on him as a mental schema. Bowlby, rather than the notion of mental schema, used an internal working model (adopted from early work in artificial intelligence). The internal working model of Bowlby, unlike Piaget's, has an emotional content. Thus, the internal working model that the infant forms depend on the emotional interaction with his parents – especially the mother, is this model that determines the way in which the infant processes the world around him. Later, the internal working model proposed by Bowlby would be verified empirically by Ainsworth and Main. For Bowlby belonging (attachment in his words) is also crucial in the psychological development of adults; this proposal would be empirically verified by Fonagy.

The psychology of belonging indicates that not only the future personality of the child, adolescent and adult correlates with early emotional learning, but also their mental model of information processing and the subsequent attitude that he/she will have as a parent. Neurobiology has proven that the neuronal development of the infant depends on the quality of the relationship with the parents. Both, the psychological theory of belonging, and contemporary neurobiology, highlight the importance of the quality of nonverbal communication and of the emotional relationship.

Some genetic studies, particularly of twins created separately, have shown the power of genetics in determining some key traits such as intelligence, personality, temperament, preferences, and aversions. But none of these traits are correlated with how secure the personality is. The secure or insecure behavior of the child, the adolescent and the adult do not correlate with any gene: it is explained by the quality of care and nonverbal communication that the infant receives[166].

Emotion is a fundamental aspect of integration of many brain functions. Emotions can be understood as neuronal integration processes that connect us with others. The integration of the activity of two brains is a vital process for survival and for proper development of the genetic potential[167]. That is why emotional imbalances have important implications for the abil-

[166] (Siegel and Hartzell, 2003, p. 149). Siegel, DJ, and M. Hartzell (2003, paperback ed. 2004), *Parenting from the Inside Out, New York, Penguin Group*.

[167] Siegel (1999), op. cit.

ity to reason and the physical health of the individual. Acute problems of belonging disrupt the function of brain circuitry required for mentalizing.

Neurons that fire together create neural synaptic circuits that underlie the operation of the flow of information in the human brain. These circuits store information and form a model of internal memory that consists of invariant memories that organize the infinite information that is perceived from abroad. Without these models of internal memory, the infinite information from the environment would not be actionable and would constitute a chaos. Thus, most of what we perceive does not come to us by our senses but is generated by the internal memory model. Therefore, early childhood is crucial because it defines the brain's first model of the world.

Our genetic code is defined in such a way that it only develops properly because of the adequate experience with the outside world. From inherited genetics there are several possible developments, and which of these happens depends on the social experience: in which the initial care of the infant and the child's early years play a basic role. Suomi shows that monkeys with a gene that impacts the metabolism of serotonin show abnormal social behavior in the absence of maternal care; however, if they are grown with appropriate mothering the abnormal behavior is regulated[168].

The need for a social life is not only human, but also in general a characteristic of mammals and even other animals like birds. Harlow's and Lorenz's experiments, among others, have shown the strength of the social instincts in mammals and other species.

There is a limbic regulation between mammals that allows communication between them and strengthens the vital chemical activity of the parties involved. Neurotransmitters are released by the body because of interpersonal relationships. In relationships with people close to us the body releases opium, and another neurotransmitter, the oxytocin, which is released by the mother before delivery and in adolescents during the crush. Long forced separations disturb adult cardiovascular, hormonal, and immunological processes functions. Neurotransmitters are used in adults for the treatment of nervous disorders: serotonin (Prozac) is used for anxiety, depression, low self-esteem, and hostility, among others; opium reduces anxiety.

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[168] Suomi (1999, 2000). Suomi, SJ (1999), *"Attachment in rhesus monkeys", in J. Cassidy and PR Shaver (Eds.), Handbook of attachment. Theory, Research and Clinical Implications, 181-197, New York, The Guilford Press.* 2000 *"A biobehavioral perspective on developmental psychopathology. Excessive aggression and serotonergic dysfunction in monkeys ", in AJ Sameroff, M. Lewis, and S. Miller (eds.), Handbook of Developmental Psychopathology, 2nd. ed. New York, Plenum Press.*

Anxiety and depression are the first consequences of the limbic omission. Spitz showed that children in orphanages and prisons, which are not given interpersonal care, lose weight, get sick and often die[169]. The limbic isolation in humans also has serious consequences, the lack of a relationship of belonging to the family and to society leads to all kinds of undesirable aggressive behaviors, such as crime.

Grossly inadequate synaptic connections in the early years can impair brain function to the point of leaving it without redress. When acute negligence with the child occurs, babies show a head circumference less than normal, their brain has shrunk by the loss of millions of cells result of the lack of interpersonal relationships and of maternal protection; the possible cause is excess cortisol and other hormones triggered by stress that cause neuronal damage[170].

Most adults remain with the personality that they developed as children, so that even if there is hope of change, this does not happen very often. There are biological reasons that hinder the personality change (even though with appropriate therapy or with new solid belonging conditions, it is only impossible in extreme cases).

The lesson learned from the neurobiology of belonging is that we are beings whose individual adequate genetic development depends on the proper belonging to the outside world. Emotional stability, which depends on adequate belonging, is a prerequisite for proper reasoning. The autobiographical consciousness allows humans the use of reason and imagination to reinterpret the past and to analyze and create options for the future; but this ability depends on humans' emotional stability, which is mainly developed based on an appropriate belonging.

The most important discovery of contemporary neurobiology is that the genetic program is designed primarily to work in proper interaction with the environment. The evolutionary purpose is the biological survival value, and for it is necessary to ensure the adaptation of the body to the environment. Therefore, our genetic inheritance is governed by the principle of adaptation to an outside world. And since the world is moving, complex organism's adaption requires them to move.

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[169] Spitz, R. A. (1945), Hospitalism: an Inquiry into the Genesis of Psychiatric Conditions *in Early childhood. the Psychoanalytic Study of the child , 1, pp. 53-73.*

[170] Teicher 1997 and 2002. Teicher, MH et. al. (1997), *"Preliminary evidence for abnormal cortica development in Physically and sexually abused children using EEG coherence and MRI, Annals of the New York Academy of Sciences, 821, pp. 160-175.* Teicher, M. (2002), *"The Neurobiology of Child Abuse", Scientific American (March 2002), pp. 68-75.*

Belonging is the identification with the outer world product of the development of our evolutionary potential relationship with it. Belonging involves reasoning, but has an emotional base given by the limbic brain and it requires the imagination that characterizes the right brain hemisphere. We belong in our existential uniqueness: we are unique, and we are different to the external world, but we can develop our potential belonging. The unique existence implies that identification is never a complete integration. Individuality (Derrida's "Differeance") is an incontrovertible fact of the individual reality. The tension between the individual and society is never fully eliminated, a fact that Freud properly highlighted, and Bowlby underestimated. But Freud never realized to what extent the individual can identify with society, so that belonging may predominate over the individual distinctness. The life of a living human being necessarily involves the process of developing his potential belonging in relation to those he loves, the social group and the existential universe surrounding him. The main bridge between existential individual uniqueness and belonging are emotions. The holistic and imaginative functions of the right hemisphere and the limbic brain allow for the development of emotional bonds which are the basis for the development of individual belonging to those he/she loves, to the society as a whole and to the biological and material universe that surrounds him/her. But humans are also provided by the evolution of a cortical brain and of the capacity for mentalizing. The relations of belonging, thanks to language, are expressed in the narrative, which also involves the left hemisphere.

The narrative creates consistency and integration at the individual level; and it generates identification and the possibility of conceptual belonging to the people we love, society and the existential universe. Mentalization generates a conceptual system that is not only based on emotions, but also in mentalized concepts that define a culture that can be transmitted not only through customs, practices, and actions, but also conceptually via verbalization and language.

The Three Belonging Ways

The individual has three different ways to belong[171]. The definition of each is presented in Table 4.1. The three belonging relations have emotional bases and all of them are required for the proper individual development.

[171] Obregon, C. 2009. *La Soledad y el Amor*. Amazon.com. Research gate.com.

TABLE 4.1. THE THREE BELONGING WAYS

Belonging: is the identification with the outer world product of the development of our evolutionary potential relationship with it.
Love: the belonging relation with our mother or care giver and to those near to us.
Social significance: the relation of belonging to society.
Existential significance: the relation of belonging to the existential universe.

The psychological theory of belonging highlights the belonging relation with the mother or care giver, the father and those near to us - the first way – love.

Although social significance - our relationship of belonging to society as a whole - was a concerned for Bowlby, the founder of the psychology of attachment (belonging in our words); did not develop a theory concerning social significance. However, social significance is crucial for proper individual belonging. The implications of social belonging in individual psychology have been emphasized by other schools in psychology - such as interpersonal relational psychology, personality psychology, learning psychology, social psychology, and the psychology of the positive-emotions. The fundamental relevance of social significance has also been highlighted by sociologists as relevant as Durkheim and Weber.

In the case of existential significance, contemporary psychiatry begins to recognize the importance of meditation and mindfulness. Being aware of life itself and our existential relationship with the universe around us gives us peace of mind, regulates our chemical processes, and makes us less vulnerable to suffered or remember traumas. Germer and other scholars describe mindfulness as a non-verbal process of being intentionally focused on the present and aware, but without involving a thought process[172]. Being conscious promotes affective regulation and stimulates the imagination, facilitating therefore the mentalizing process. Affective regulation is required to have a reflective attitude; mentalizing includes both. Diverse conceptual systems give different cultural relevance to mentalizing versus the process of being conscious.

The psychological and biological viability of the individual depends on his/her relations of belonging.

Contemporary psychology and neurobiology do not show us neither the irrational altruistic individual of behavioral economics, not the rational self-

[172] Germer, CK, Siegel, RD (2005). *Mindfulness and Psychotherapy. New York. Guilford Press.*

ish individual of neoclassical economics, and neither Sen's rational ethical individual. Instead, it is an individual with very flexible mind and capable to display distinct behaviors and to adapt to diverse social and environmental circumstances. The psychological individual is capable of behaving like any one of the three mentioned individuals, depending on the circumstances.

We should not confuse evolutionary individuality with Western individualism. The evolutionary individuality does not provide any specific social concession to the individual, Western individualism do, specifically, freedom to vote, to be active politically and to express freely; and freedom to own property and to exchange goods and services.

The Individual and the Society[173]

Humans have two key evolutionary characteristics: 1) individuality i.e., humans are individuals, genetically differentiated from others, who born and die; and 2) belonging i.e., humans belong to a social group. To maximize humans' survival chances, evolution provided them with two kinds of instincts: selfish instincts (hunger, fear, sex, and aggression) and the belonging instinct. Selfish instincts guarantee that everyone looks up to his/her individual own survival. A belonging instinct guarantees that the individual is related to a group, because that increases his/her survival chances. The belonging instinct was evolutionarily designed to guide and redefine the selfish instincts because group and species survival are more relevant than the survival of any specific individual.

To be human meant from the beginning to live in a group. Individual's survival depends upon his belongings to a group. Any animal that is evolutionarily designed to live in group has a pragmatic institutional arrangement that orders the assignments of the individuals in the group and define the required tasks for the group's survival. Humans, due their higher abstract capacity, from the beginning develop a conceptual system that works in parallel with the institutional arrangement. In fact, two of three hundred thousand years before the appearance of the Homo

[173] In building the general framework of the individual and the society we are using social abstract categories that are useful to illustrate the relationship, the reader however is warn that other social abstract categories could be used. The ones that are being used are chosen because they fulfill the task of allowing us to fruitful interact with social reality as we will show in the next chapter. However, other abstract categories may turn out to be also useful. Science does not discover reality; it just interacts fruitfully with it.

sapiens burial rituals already showed the presence of a conceptual system with the vision of an extended time.

The first task of the conceptual system and its corresponding institutional arrangement is to define for any given society the three belonging ways discussed before: love, social significance, and existential significance. Love guarantees the required emotional and physical nurturing that the upbringing of the child requires for the species to survive. Social significance defines the belonging of the individual to the group and maximizes both the individual and the group survival chances. Existential significance orders the relationship with the outside biological and physical world which is required for survival. Social significance is expressed through three social systems: integrative, power, and economic systems. The interaction between the individual and the society (the institution) is presented in table 4.2 and the definitions of the corresponding categories in table 4.3

TABLE 4.2 SOCIAL INTERACTION

Individual	Love Social significance Existential significance	Institution: conceptual system and institutional arrangement
Social significance:	Integrative system Economic and trade System Power system	

TABLE 4.3 DEFINITIONS OF CATEGORIES OF ANALYSIS OF SOCIAL BELONGING

Individual: refers to a physical individual that has survival selfish instincts as well as the belonging instinct.

Institution: is the sum of a conceptual system and its corresponding institutional arrangement.

Conceptual system: it is a mixture of knowledge, beliefs and habits that fully explain the social and physical reality, and guide and direct social and individual behavior.

Institutional arrangement: The set of institutions that make operative the conceptual system.

Belonging, love, social significance and existential significance are defined in table 9.2.

Integrative system: traditions and customs and social obligations, for example: established rules, the law; values and social beliefs in general; ethical principles; religion; benevolence; and individual commitments individually socially sanctioned.

Economic system: the distribution of property or use rights of economic resources, and the production and distribution of economic goods and services.

Power system: the social use of force

Primary Society: the individual is not differentiated from the society. The society, in turn, is not differentiated from the existential universe.

Traditional Society: the individual is differentiated from society in terms of his responsibilities, but not in terms of his rights. The society may or may not be differentiated from the existential universe.

The Western Society: the individual is differentiated, in addition to his responsibilities, by his rights. The individual exercise his rights of free expression, political participation, free vote, to own property, to pursue his individual economic interests, and to freely exchange goods and services. The society is differentiated from the existential universe.

Magic is the conceptual system corresponding to the primary society. In magic the universe is conceived as having a cosmological order that includes all the existential universe – which is defined as composed both by the living and the death. The universe is accessible to humans through pragmatic rituals that include both what today we call technological knowledge and what today we call magic.

Rationality is the conceptual system of the traditional society. The universe is conceived as being composed of stable essences (an inheritance from magic) which are accessible to humans either through reason (Greeks, Confucius), through illumination (Buddhism), or through a mystical union with God (traditional Catholicism, Islamism).

Harmony is the conceptual system of the Western society. The universe is conceived as in rationality by stable essences. However, within those stable essences we find God's moral law that provides human rights. Therefore, humans get political freedom and therefore the social universe is no longer accessible by reason as in rationality, but it is the consequence of the aggregate results of individual voting. The universe in general is accessible to humans the same ways that in rationality, but the social universe becomes irrational and defined only through democratic means. In Protestantism, the individual establishes connection with God directly by working in the benefit of the community.

The basic social interaction system of any society is the integrative system. The integrative system consists in the traditions and customs, socially established obligations, established norms, the law, values, and social beliefs in general, ethical principles, the religion, benevolence, and commitments acquired individually but socially sanctioned. This system holds society together, and it is the base that defines the main relationship between the individual and the society. The power system refers to the use of public force. The use of force is usually only allowed to the State; individuals are forbidden to use any sort of force against other individuals of the same *in-group,* although they may be allowed to use it against other members of the society which are conceived like *out-group* members, i.e., slaves. The power system, or the threat to use it, usually

governs, to a large extent, the relationship between groups which see the other as "out-group" – although diplomacy is frequently also used. The economic system is related to the definition of property and use rights of economic resources and the production and distribution of economic goods and services. The hallmark of every society is the degree to which the integrative system validates the economic system as a source of social significance. In primary societies the economic system is highly restricted; therefore, production and distribution of economic goods is mainly decided within the integrative system. In traditional societies, the economic system is differentiated, but it is still not dominant. In the Western societies the economic system is a main pillar of the social significance; and even if the integrative system remains central, its relevance is reduced to the extent that it validates the importance of the economic system.

What is an institution? In other works, I have defined an institution as the sum of the conceptual system and its corresponding institutional arrangement[174]. The definition sounds somewhat tautological, but it is not. It is meant to indicate that the actual physical institution that we see in a society always have a corresponding conceptual system attach. Think for example in the institution of the parliament in England, it has its members, and they discuss in a specific building and so forth – but they also represent a conceptual system –i.e., the constitution, the laws and so on. The conceptual system is defined as a mixture of knowledge, beliefs and habits that comprehensively explains social, biological, and physical reality, which guides and directs social and individual behavior. An institutional arrangement is the set of institutions that make the conceptual system operative in real social life. The conceptual system and its corresponding institutional arrangement have a specific historical culture in each society. Therefore, social decisions nor only correspond to todays' choices (whether democratic or not) but also to the historical institutions that compose the society at any given time. In democratic societies, democracy always operates in an already given institutional arrangement and its corresponding conceptual system, which do change through democratic decisions, but slowly.

This general CI interaction scheme between the individual and the society already alert us to the problems encountered with several of the schools of economics, and of institutionalism in general, that we have been discussing before. Neoclassical economics and RCI intend to describe the social dynamics as the consequence of individual preferences

[174] Obregon 2008 *Institucionalismo y Desarrollo*., op. cit.

+ values. In RCI institutions are seen as performing only the function to allow the private systems of preferences and values to work properly. But the individual of these schools is the Western individual consequence of a particular history. Their results are only relevant for the Western's economic system and leaves out the Western's integrative and power systems. Moreover, for other cultures in which the individual has not yet been differentiated (or fully differentiated) by his rights, the Western individual is not even useful to explain properly the economic system. That is why neoclassical economics has failed in its recommendation to developing countries, failed in its advice to ex USSR countries, and has failed to serve as a guide for global economic policy. BE, as we have said, does not explain most economic problems in Western economies, and it is useful only for a particular subset. BE cannot explain the economic growth of capitalism. Moreover, understanding why individuals may behave altruistic in the dictator's game and selfish whenever aiding poor people in other countries, requires realizing than in one case the integrative system is strong and in the other it is weak. Sen's economics cannot explain economic growth and many other economic problems. Sen's ethical human enters the integrative system and cannot be discussed only within the economic system alone. And any ethics is consequence of a conceptual system, and there are not necessarily common trends (partial orderings) between two distinct cultures' conceptual systems. SI stresses the relevance of institutions in defining individual behavior, but it has two problems, it undermines the relevance of individualism in explaining the economic growth in capitalism and ignores the social conflict consequence both of: 1) Individual selfish survival instincts, and 2) the fact that belonging is stronger in small groups, and therefore social conflict between small groups in an enlarged society is always there. HI focus in the path dependency but undermines the strength of social engineering as it has been shown in the fact that a selected group of the Asian countries developed in an average of only twenty years[175]. This strong social engineering, however, was not consequence of the rational selfish individual of the neoclassicals, and neither of the altruistic cooperative individual of behavioral economics, or of the ethical individual of Sen, or the creative innovative individual of NIE; it was the consequence of decisions and social choices of a group of leaders that use the strength of traditional institutions to properly integrate their economies to the Western markets. We cannot explain this successful Asian growth starting from the individuals,

[175] Obregon, C. *Globalization Misguided Views*., op. cit.

we must start from the social choices (the social engineering) of the leaders. Yet Asia's success cannot be explained from an institutional perspective alone. The difference between the failed communist model and the successful Asian model is that the latter exports to the dynamic Western markets (Western markets which characteristics need to be understood with neoclassical economics plus the role of the middle class in these markets). The real social world is very complex and must be understood with flexibility, using the scientific model that is appropriate for a particular circumstance and a given problem. But clearly social choices go well beyond those envisioned by SCT and even the ones described by NIE.

TOWARDS A CI'S NEW GROWTH THEORY

There are three failed economic growth models: 1) The import substitutions model – that failed in Latin America (LA), and other countries in the fifties and seventies; 2) the communist model – that failed in the USSR and other countries in the cold war; and 3) the neoclassical model – that failed in LA and particularly in Mexico after the nineties. And there are two successful growth models: 1) the Occidental model – with which the Western countries developed; and 2) the Asian growth model – with which certain Asian countries developed. The failure of the neoclassical model shows that it is not sufficient to explain the success of the Western countries- and therefore both the success of the Occidental model and of the Asian model must be explained with a different theory from the neoclassical. Moreover, in chapter two, we have shown that one of the problems of Sen's economics is that it does not have a theory of economic growth. And in chapter three, we have seen that NIE is only a partial explanation of the success of the Occidental model, and that NIE cannot explain the growth success of the Asian model. Therefore, a new CI's growth theory is required. This new CI's theory must be capable to explain: 1) Both the successes of the Occidental model and of the Asian model; 2) The failures of the import substitution model, the communist model, and the neoclassical model; and 3) The incapacity of the endogenous growth models, Sen's freedoms, and North's Western institutions to explain the differences in the real world between the countries that adopted the Asian growth model versus those that did not.

It was not until Nobel Prize winner Robert Solow's growth theory was published, in 1956, that neoclassical economist had a formal growth theory. However, it did not have any impact in the economic policies in the West. Its main influence was in the import substitution model adopted in Latin America and other regions, and in the communist model used by the USSR. And both models of economic growth failed. They were unsuccessful because saving in these models was associated with obsolete technology, which did not resist the confrontation with the frontier technology developed in the West. The existence of the developed West changed the conditions under which development can occur. When the West develop itself, any new technological discovery was frontier technology. But once the West is already developed, the West defines the frontier technology; and any technological discovery made outside of the West becomes obsolete technology. And any growth based on obsolete technology becomes spurious and disappears when the economy opens to trade with the West. A real experience illustrates this point. When East Germany joined West Germany, it represented around 13% of West Germany's GDP; five years later, it was in the vicinity of 8%[176]. The same happened to Russia in the "lost decade" from 1990-2000. Obsolete technology is also one of the reasons of the failure of the import substitution model.

Due the failures of the previous mentioned models, it is not surprising that with the neoclassical revival in the eighties, the Washington Consensus recommended for emerging economies (EE) to fully integrate themselves to the West's microeconomic equilibrium. They were advice to open their external sector, to free their internal prices, to reduce their government size, and to maintain a conservative monetary policy. Among the countries of the world, the one that followed most closely this recommendation was Mexico – and it was a big failure. Mexico's GDP per capita annual rate of growth 1990 to 2018 was only 1.03%. It was unsuccessful mostly due to both: the theoretical disregard of the importance of the institutional differences between the developed economies (DE) and EE; and to the ICTR which drastically change the parameters under which foreign investment occurred. Western economic growth happened in nations that had already a specific historical institutional arrangement. And exporting those institutions is very difficult as North has pointed

[176] See Obregon 1997, p 260 and Smyser 1993, chapters 7 and 8. Obregon, C; 1997 *Capitalismo hacia el tercer milenio: Una historia cultural de la evolución de las economías del mundo*. Patria, Mexico. Smyser, W.R., (1993). *The German Economy*. St Martin Press, New York.

out. But even more decisive was the fact that the ICTR fragmented the global process of production, so that DE were no longer interested in exporting full production processes and were only concerned with the specific conditions given to them for the segment of production they were interested in allocating in EE. Therefore, the whole neoclassical institutional characteristics of an economy became somewhat irrelevant. And the conditions given to the fragmented process of production dominated the investment decisions. This explains why so much capital went to a communist country like China, and so little to "neoclassical" Mexico – which is why this last country failed.

In Solow's model, technology is exogenous, and economic growth is defined by the level of savings, which is what moves the economy from one growth path to the next. Endogenous models of economic growth, as their name indicates, consider technology as an endogenous phenomenon. Four main schools of endogenous growth are worth mentioning: Science, Learning by Doing, Research and Development, and Education (quality of labor). All these schools, further enrich our longitudinal understanding of the Occidental model of growth. Each one of these variables has been key in the fast Western's economic growth. They, however, do not explain cross sectional data.

The endogenous growth models failed to explain the Asian growth model. None of the countries that adopted the Asian model had an initial advantage in any the variables mentioned by the endogenous models. Moreover, the endogenous models of economic growth failed to explain satisfactorily the previously mentioned failures of the import substitution model and the Communist model. The USSR, for example, excel in science, had significant research and development, applied learning by doing, and had education and highly qualify labor; and despite all of these, it grew 1950 to 2000 in per capita terms less than Africa.

The problem with most theories of economic growth is that were built either to explain the West's growth or having in mind how to imitate it. But the West had its own institutional history, and other cultures and regions theirs. This has been the source of many failures, or lack of explanation, of the theories of growth. The attempt to copy the historical savings of the West induce the failure of both the communist model and the import substitution model. Trying to incorporate the EE to the West meant the failure of the neoclassical model. The endogenous growth models do not explain neither the success, nor the failure in non-Western economies. Sen's Western freedoms, while important in the West's history, do not explain

economic growth differences in countries outside the West[177]. Even North assumes, without historical justification in any real example, that the adoption of the Western institutions (if they were accepted by the informal institutions, which is not the case) will produce development in the EE. The truth is that Mexico, by any standards, adopted significantly more Western institutions than China and failed, while this last country succeeded.

One of the consequence of models of economic growth centered in the West, is that it is in general assumed that copying the West is possible. Therefore, it is argued that if all the countries in the World were democratic, and the global markets were open and free, the World would enjoy peace and economic progress, and for some economists even justice[178]. Nor only this idealism is impossible to achieve, but it is theoretically and historically incorrect. The enlargement of free markets did develop the West, but it always happened within a global order based upon national interests. While capitalism is not bounded by the national borders, democracy is. And this necessarily means global conflict. Which can only be avoided by building global institutions that recognize the interests and relative power of the nations involved. The global economy implies the need of a different institutional arrangement than the one that has developed within each one of the distinct DE. While in most DE institutional development has been a success; including democracy, that has gone hand and hand with fast economic growth. At the global level there is a lack of a proper institutional arrangement. Poverty, income distribution, international finances, global health, transnational crime, environmental preservation, international trade, and so on, at the global level look like a highly underdeveloped economy; and reflect the lack of a proper world's institutional arrangement. The 1930 GD, the 2008 GFC, and the 2020 GP are explained to a large extent by the weakness of the global institutional arrangement. And if it is not seriously strengthened, other global crises will occur; some of which are already in the making like the consequences of the Russian-Ukraine war.

In summary: In the established theories of economic growth, we encounter four main problems. The first one is the attempt to export the Western model to other countries. The second problem is to define development basically as the process of adopting the Western institutions. The third one is the lack of a theory of development based upon alternative institutions to the West's. And the fourth problem is the lack of an

[177] Obregon, C; 2008. *Teorías del Desarrollo Económico*., op.cit.

[178] See Obregon, *The Economics of Global Peace*., op. cit.

adequate theory to explain the World economy, which requires institutions that are very different from the typical ones of a Western DE. The new CI's growth theory that must be developed should successfully face these four challenges.

Let us first start by listing whether the key elements mentioned in diverse theories of economic growth were present or not in the Occidental model, in the Failed models, and in the Asian model, see Table 4.4.

TABLE 4.4 ECONOMIC GROWTH MODELS

	Occidental Model	Failed Models	Asian Model
Neoclassical Theories	Yes	Yes	No
Science	Yes	Yes	Yes
Research and Development	Yes	Yes	Yes
Learning by Doing	Yes	Yes	No
Education	Yes	Yes	Yes
High quality labor	Yes	Yes	Yes
Savings	Yes	Yes	Yes
Other Theories			
Sen' Freedoms	Yes	Yes	No
North's Western Institutions	Yes	Yes	No
Classical Theory			
Smith's Enlarged Markets	Yes	Yes	Yes
NGT new element			
Technology guided by Middle Class	Yes	Yes	Yes

Science was key for the Occidental model; in the failed models it was clearly present in the USSR and in Russia, and it does not explain the success of the Asian model. Thus, science is clearly needed for the economic growth of the World but: it is not sufficient to obtain growth in particular countries, and it is not necessary to obtain growth in a dependent model.

Both Research and Development and Learning by Doing were both key for the Occidental model and for the Asian model. Therefore, they are necessary for economic success. However, by themselves they do not generate growth, because they were also present in the failed communist model.

We have distinguished between Education and High-Quality Labor, the first being scholar education and the second specific skills acquire for special labor tasks. Education was a key element in the Occidental model

but was not in the Asian model. And it was present in the communist model. Therefore, education does not promote growth by itself, and it is not necessary for dependent growth to happen. High Quality Labor is necessary for successful growth, it was present in both the Occidental and the Asian models. But, by itself does not generate growth as the failed communist model shows.

High savings are necessary for successful growth, but not sufficient. It was present in the successful Occidental and Asian models but was also present in the failed Communist and import substitution models. Thus, by itself does nor promote growth.

Sen's freedoms explain the Occidental model, but clearly are not sufficient nor necessary to generate dependent economic growth. In relative terms Latin America enjoy more freedoms than Asia (particularly in the beginning) and Asia perform much better.

North's Western institutions do explain the Occidental model but are not sufficient nor necessary to generate dependent economic growth. Their presence was much stronger in Mexico than in China for example.

Smith's theory of enlarged markets explains both the Occidental model and the Asian model but fails to explain both the failure of the USSR and of the neoclassical model in Mexico.

The technology guided by middle class explains the Occidental model, the Asian model, and the failure of the Communist and the Import Substitution models. However, it does not explain the failure of the neoclassical model, Mexico did export to the international middle class and failed. Thus, it is necessary, but not sufficient to create economic growth.

What do we learn from the previous comparison between diverse model of economic growth? First, the explanations of the Occidental growth model are not necessarily adequate to explain the success of the Asian model. Second, the explanations of the Occidental model happened historically all at once, and they all correlate and together they explain the West's success, but each one of them isolated do not necessarily generate economic growth.

Therefore, CI's new growth theory must consist in a set of distinct growth theories: we need a theory of growth for the Occidental model, a second distinct theory of growth for the Asian model, a third theory to describe how can todays underdeveloped countries become developed, and finally a fourth theory to promote the economic growth of the world at large.

The theory of growth for the Occidental model is well known, it is the sum of the neoclassical theories plus the classical theory; but CI add

a new element, technology guided by the enlarge middle class market.

The theory of growth for the Asian model has already been extensively explained in other works[179]. It is distinguished from the Occidental model in several aspects. As a dependent model it does not emphasizes science, its technology is guided by exporting to the West's middle class, saving is very high, imports and exchange rates are managed, governments intervene in guiding the economy but let markets freely operate. It does not emphasize neither scholarly education, or Sen's freedoms, or North's Western institutions.

What should todays underdeveloped countries do? The ones that have the possibilities, should replicate the Asian growth model, and integrate themselves in the ICTR. The poorer countries however cannot do it and will only become develop if eventually there is a new Marshall type plan focused on their development.

What does the long run rate of growth of the world depends upon? It is defined by: 1) The global savings rate given by inter-temporal preferences, and institutional characteristics; 2) technological development which is influenced by many endogenous causes such as science, R&D, learning by doing, education (quality of labor), the size of the world's free market –which includes the global middle class, and the fast changing preferences of the middle class; 3) productivity given by the incorporation of low wage workers, traditionally both through migration of labor or capital, and recently through the ICTR.

Diverse schools of economics have developed distinct theories of economic growth. Mainly the focus has been to learn from the West success, to recommend others to do the same. But once CI gets rid of fixed essences, like the neoclassical human optimizer, the innovative individual of North, or the ethical responsible free individual of Sen, it becomes clear that there is not one unique theory of economic growth that can be applied universally.

In fact, the success of the West has already changed the global institutional conditions for other countries. There is however a further lesson to be learn, the only other model of growth, besides the Occidental, that have been successful is the Asian, and its success was related to using frontier technology - because of its exports to the West. Thus, the free West markets that transmit the dynamic changing preferences of the Western middle class are quite relevant. Which means both that the neoclassical price theory is crucial to understand the transmission of in-

[179] Obregon, C. *Globalization Misguided Views*., op. cit.

formation in these middle-class free markets, and that Smith was right in the relevance of the expansion of the markets – but a key element of such expansion is the fast growth of the Western middle classes.

The sketch that we have presented of the new CI's growth theory already has three main contributions: 1) Unveils the role of the middle class to enlarge the market in capitalism, and how its changing preferences guide the expansion of the frontier technology; 2) Auspices the understanding that increased savings directed to obsolete technology will not create sustainable economic growth; 3) it shows that economic growth depends on the institutional arrangement; therefore, there cannot be just one model of economic growth capable to explain the Occidental's, the Asian's, the underdeveloped countries', and the World's economic growth. In each case a careful study of the relevant institutions is required.

NIE due to its Western bias is unable to explain the complexity of the real World, in which other cultures compete with the West's with the strength of their own historical institutions. NIE is not adequate to understand the success of the Asian growth model, neither it is capable to guide us in answering what global institutions are required. In this section we have outlined some of the characteristics that a new CI's growth theory should have. The interested reader will find more in this topic in some of my previous works[180].

CONCLUSION

CI presents an extensive theory of social choices. Each one of the schools incorporated into CI has studied a particular subset of social choices. Classical and neoclassical economics focused on social choices related to economic growth and economic efficiency. Marx's economics centered on the social choices related to justice. Sen's economics relates to social choices focused on poverty, well-being distribution, relative deprivation, and gender inequality. Sen's SCT is particularly useful for social choices involving small groups or communities interested in aggregating individuals' preferences + values. BE is useful for certain economic emotional choices related to the integrative system. NIE explains why social choices always involve institutions, and why exporting Western institutions to developing economies is so unsuccessful. CI incorporates all the previous

[180] Obregon, C. *Globalization Misguided Views.,* op. cit.

social choices; and in addition, explains successful social choices taken by leaders in institutional arrangements that diverge from the West's, opening the possibility to understand the available alternatives for non-western societies (including the world seen as one culture).

What are the most critical economic social choices? Economic growth, economic stability, well-being distribution and poverty elimination. Today, all these social choices are taken by institutional officers (leaders)[181]. We have already seen that aggregating individuals' preferences + values through SCT is not possible for large groups, and that is the reason why the critical economic choices today are taken by institutional officers (leaders).

Brexit was an attempt to decide a critical economic choice through aggregating preferences + values, and it was a failure. Sen has argued that people was not well informed, but Brexit was voted several times, and there was information all over the place; the truth is that the critical economic choices are highly technical and are not adequate to be taken directly by the citizens (in a democracy) or the people in general (in a non-democratic regime). But then the question must be raised as to how the citizens (in a democracy) or the people in general (in a non-democratic regime) can participate to influence the institutional officers (leaders)' social choice. To answer this question, we need to go to the next chapter to discuss socio-political choices.

[181] The social choice of the model of economic growth to be adopted in developing economies is taken by institutional officers (leaders), i.e., government officials, parliament members, and functionaries of international organisms such as the IMF and the World Bank. The economic stability programs both in developed and in developing ones are taking by institutional officers (leaders,) i.e., government officials, central bank officials, and in the case of developing economies also by functionaries of international organisms such as the IMF. Well-being distribution decisions both in developed and in developing ones are taken by institutional officers (leaders), i.e., government officials, parliament members, and in the case of developing economies by functionaries of international organisms such as the World Bank. And poverty elimination programs in developing economies are taken institutional officers (leaders), i.e., government officials, parliament members, and functionaries of international organisms such as the World Bank.

PART TWO: THE POLITICS AND ETHICSOF SOCIAL CHOICE

CHAPTER FIVE: SOCIAL CHOICE IN THE POLITICAL SYSTEM

How do political choices happen in democratic and non-democratic societies, and how can they be improved, is the central topic of this chapter. In the first section, we discuss the technical problems to aggregate individual votes i.e., the voting paradox, and we highlight the importance of an institutional democracy. In the second section, we discuss how political choices are taken in diverse societies, and which are the particularities of the liberal democratic societies. And finally, in the third section we briefly discuss the importance of civil society's participation in political choices.

THE VOTING PARADOX AND INSTITUTIONAL DEMOCRACY

It has been known for more than two hundred years that there is not necessarily a solution to aggregate individual votes to be able to know what the majority wants. The Condorcet Paradox, discovered by him in the eighteenth century, can be shown as follows:

Assume three persons 1, 2 and 3 with the preferences over three alternatives x, y and z[182] shown in table 5.1

TABLE 5.1 INDIVIDUAL'S PREFERENCES

1	2	3
x	y	z
y	z	x
z	x	y

In pair-wise voting and under majority rule xwy, ywz and zwx (where w denotes means wins over). The result violates transitivity, but in addition creates majority cycles in which there is not one winner.

[182] This example comes from Sen, Amartya, 2018. Collective Choice and Social Welfare (p. 283). Penguin Books Ltd. Kindle Edition.

Borda who was contemporaneous of Condorcet develop what is call the Borda count which avoids the majority cycles of the Condorcet paradox. The Borda count does allow the selection of only one candidate. The Borda count is based on the scores given to candidates in individual preference rankings. The candidate's points given by a voter equal the number of candidates ranked lower than it by the voter in question. Summing up the points given by all voters to a given candidate constitute the latter's Borda score. The election result under the Borda count is the ranking of candidates in the order of their Borda scores.

The Borda count however is not a general solution because it violates one of the Arrow's criteria: the independence of irrelevant alternatives (see chapter one and annex one and two). There is not known general solution for the Condorcet paradox without violating the Arrow's criteria. Therefore, any particular solution becomes dependent on the voting procedure chosen; thus, by changing the voting procedure the result can be manipulated.

In fact, even if there is a Condorcet winner (that is one that wins over all the other candidates in pair-wise voting), if the voting method changes from pair-wise voting to another the winning candidate may also change.

In the example in table 5.2, the preferences of 11 voters on six candidates are presented[183], and there is a Condorcet winner, E wins over all the other candidates in pair-wise voting. But by changing the voting procedure the result can be modified, and any of the other five candidates can become the winner. Table 5.3 shows that with Copeland's rule, which is a Condorcet extension, E is the winner; but, with other voting procedures the winner changes as follows, plurality vote A wins, plurality run-off system D wins, The Borda count C wins, approval voting B wins, and range voting F wins.

TABLE 5.2 VOTERS PREFERENCES (11 VOTERS)

4 voters	2 voters	3 voters	2 voters
A	B	D	F
E	E	C	C
C	C	B	D
F	F	E	E
D	D	F	B
B	A	A	A

[183] This example comes from Hannu Nurmi, 2022. Social choice, stable outcomes and deliberative democracy, *Control and Cybernetics vol. 51 (2022) No. 2 pages: 137-149.*

TABLE 5.3 SIX DIFFERENT VOTING PROCEDURES AND SIX DIFFERENT WINNERS

Procedure 1.- **Plurality voting- winner candidate A.** Each voter exercise one vote which is given to his/her preferred candidate. A = 4 votes, D = 3 votes, B = 2 votes, F = 2 votes. A wins.

Procedure 2.- **Plurality runoff system – winner candidate D.** Elects the candidate that is majority preferred to its sole competitor in the contest between the two largest voter-getters in the plurality voting. Two major competitors are A and D, A preferrred by 4 voters, while D is preferred by 7 voters. D wins. E wins.

Procedure 3.- **Copeland's rule -winner candidate E.** Elects a candidate that would defeat more of its contestants in pairwise majority comparisons (i.e. ignoring other candidates) than any other candidate. Copeland's rule is a Condorcet extension, because it always elect the Condorcet winner when one exists. The Condorcet winner is a candidate that would defeat all other candidates in pairwise majority comparisons. In pair-wise voting A loses against everybody, B loses with everybody except A, C wins gainst D and F but loses with E, D loses against E and F, E wins against everybody, F loses against E.

Procedure 4.- **The Borda count -winner candidate C.** The Borda count is based on the scores given to candidates in individual preference rankings. The candidate's points given by a voter equal the number of candidates ranked lower than it by the voter in question. Summing up the points given by all voters to a given candidate constitute the latter's Borda score. The election result under the Borda count is the ranking of candidates in the order of their Borda scores. Borda scores are as follows: A= 20, B = 21, C = 38, D = 27, E = 34, F= 25. C wins

Procedure 5.- **The approval voting -winner candidate (under certain assumptions) B.** It requires more information from the voters than just their preference rankings. The approval voting elects the candidate that has more approvals than any other, calls for the voters to single out those candidates they approve of. Assuming sincere voting strategies, this amounts to requiring that the voters provide a cut-point such that all candidates above the point get one approval vote from the voter, while no candidate below the point gets any approvals from the voter in question. The approval voting gives each voter for each candidate a choice between two options: to approve the candidate or not to approve the candidate. In the profile of Table A2.1 the following – purely ad hoc – assumption is made: the group consisting of three voters approves of their three top-ranked candidates, while the remaining voters approve of only the first-ranked candidate. Scores are as follows: A = 1, B = 2, C = 1, D = 1, F = 1. B wins.

Procedure 6.- **The range voting - winner candidate under certain assumptions) F.** It requires more information from the voters than just their preference ranking. the voters' assigning a score to each candidate. For each candidate the scores given by the voters are summed up and the candidate with the highest score sum is declared the winner. Normally, a range of scores is predetermined, e.g. integers in the [0, 10] interval. Let us assume, for the sake of argument, that the nine left-most voters assign scores to candidates in the same way as in the Borda count, but the two right-most voters assign ten points to their first ranked F and 0 points to the others. Scores are A = 20, B = 19, C = 30, D = 21, E = 30, F = 35. F wins.

Arrow's theorem showing that it is impossible to aggregate individual preferences into a social choice can be complemented with tow other incompatibility theorems. 1) Gibbard and Satterthwaite's theorem which shows that *it is not necessarily in the voters' best interest to act in accordance with their preference rankings over the candidates; thus, they may hide their true preferences and game theory possibilities emerge wuth very diverse potential results(see annex 2). And Moulin's Theorem* which shows that it is not always in the best interest of voters to participate (see annex two).

Is there any general way out of the voting paradoxes (also known as impossibility results)? The answer in short is not.

There have been attempts to get rid of the impossibility results along two lines of thinking.

1) The first one is by violating one of Arrow's criteria or alternatively Arrow's assumption that interpersonal comparisons are not allowed. For example, the Borda count violates the independence of irrelevant alternatives, and the range voting allows interpersonal comparisons. However, as we mentioned, the problem is then that distinct voting procedures give different winners, and the results can be potentially manipulated.

2) The second one is by modifying the voters' preferences, so that they do not longer present a voting paradox (i.e., an impossibility result). Notice that this solution almost solves the problem by ignoring it. However, many authors, among which we find Sen[184] and Dryzek and List[185], have argued that it is possible to modify the voters' preferences through deliberation. Their proposal is that deliberation can change the preferences of the participants so that the social choice become single peaked and a solution can be found. However, there are three considerations to be made: 1) Deliberation may not end up been succesful to change the preferences as needed (nothing guarantees its success), assuming deliberations to be always succcesful is too idealistic; 2) deliberation will no take away the benefits the voters can obtain either from hiding their true preferences or from no participating; 3) organizing deliberation in large groups is almost an impossible task.

While from a pragmatic point of view it is unavoidable that the discussion continues as to what is the better way to aggregate individual voting preferences in specific particular cases; from a theoretical point of view, we already know that such aggregation is impossible for the general case.

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[184] Sen writes "As the famous Chicago economist Frank Knight, who deeply influenced the public choice theorists, noted: 'Values are established or validated and recognized through discussion, an activity which is at once social, intellectual, and creative' (Knight (1947), p. 280). There is, in fact, much force in Buchanan's ((1954a), p. 120) assertion that this is a central component of democracy ('government by discussion') and that 'individual values can and do change in the process of decision-making'. That recognition would have received approval from Condorcet, judging from his own writings on society and politics in the Esquisse". Sen, 2018., op. cit. p. 39.

[185] Dryzek, J. and C. List, 2003, "Social Choice Theory and Deliberative Democracy: A Reconciliation," *British Journal of Political Science,* 33: 1–28.

What are the implications? How then actual democracies work? What we need to realice is that, given the impossibility of a general solution, different democracies in the real world have taken distinct routes for particular solutions; but, that all these particular solutions violate the conditions required for a general solution (a Condorcet winner). Let us just briefly look at two real life examples. 1) In the US the winner is not a Condorcet winner. First of all because candidates do not confront each other in pairs. Notice by the way, that in practice confronting them in pairs will require many general votes to be taken, which is virtually impossible. And second, because the winner in fact may in ocassions not even have the majority vote on his/her side. This is possible because the US does a sort of range voting (see table 5.3), in which more weight is given to the votes of the citizens living in some states. 2) In any parliament system of course the prime minister is far from being a Condorcet winner. In specific in the UK, we must remenber that the lord's chamber is not even elected democratically by the people, instead it is chosen by the elites.

In the real world politicians have realized that the voting procedure chosen preconditions the results, that is why for example in the US there is so much discussion as to whether restrictions on mail voting and weekend voting should be introduced. Restrictions benefit the Republican party because they difficult minority voting, and lifting the restrictions benefit the democrats. Restrictions in voting (for example to those able to read or with certain minimum scholarity) were in the US for a long time the way the black votes (that suppose to be legal since 1865) were impede. Black votes only started to be meaningful after the 1930's, and even then discrimination continued, this is one of the reasons why the black movement was so strong in the 1960's (almost one century later of the legal approval for the blacks to vote).

Are Impossibility Results An Empirical reality?

In order to answer this question there are three arguments to consider: 1) Whether majority cycles (the case where there is not a Condorcet winner) are an empirical reality, and if so how likely are they; 2) wheter in real democracies the result depends in the voting procedure chosen; And 3) wheter in empirical reality the results are manipulated by changing the voting procedure.

As for 1) there have been many papers discussing this issue and there are several interesting surveys[186]. Van deem extends and supplements earlier surveys and he finds that Condorcet paradoxes ocurr in 9% to 10% of the 265 collective choices investigated[187]. If Van Deem is right, it means that although majority cycles do happen and are relevant, they are not a true menace for the practical operation of real democracies.

As for 2) the empirical evidence shows that Condorcet winners are rarely chosen. Many critical real examples of democratic process that do not choose the Condorcet winner have been found; US primaries and elections[188], elections and government formations in parliamentary democracies[189] , public spending policies[190], and others.

As for 3) there are three ways to manipulate the results. A) Manipulation by those who control the agenda and define the voting procedure. B) Strategic manipulation (insincere voting and abstentionism). And C) Manipulation of policy space by introducing new issues to overturn the old equilibria. 3A requires information and control, but if the institutions have it, then it is really the institutions' choices rather than the individuals' preferences +

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[186] Gehrlein 1983, 2006; Gehrlein and Lepelley 2011. Gehrlein, W. V., 1983, "Condorcet's Paradox," *Theory and Decision,* 15: 161–197. Gehrlein, W. V. (2006). Condorcet's paradox. Berlin: Springer. Gehrlein, W. V., & Lepelley, D. (2011). Voting paradoxes and group coherence. Berlin: Springer.

[187] Van Deemen, A. M 2014. On the empirical relevance of the Condorcet's Paradox. Public Choice Vol. 158. No. ¾, Special Issue: Empirical Social choice pp. 311-330. Published By: Springer https://www.jstor.org/stable/24507602.

[188] Riker 1982, 25f; Mueller 2003: 157f; Miller 2011, 2012. Riker, W. H. (1982). Liberalism against populism. San Francisco: Freeman. Mueller, D. C. (2003). *Public choice III*. Cambridge: Cambridge University Press. Miller, N. R. (2011). Why the Electoral College is good for political science (and public choice). *Public Choice,* 150, 1–25. Miller, N. R. (2012). Election inversions by the U.S. Electoral College. In D. S. Felsenthal & M. Machover (Eds.), *Electoral systems: paradoxes, assumptions, and procedures. Studies in choice and welfare* (pp. 93–127). Berlin: Springer.

[189] Riker 1982, op. cit: 25-28; Hard 2000; Van Deemen and Vergunst 1998; Kurrild-Klitgaard 2008, 2013; Miller 2013. Härd, S. (2000). Arbitrary democracy. In N. Berggren, N. Karlson, & J. Nergelius (Eds.), *Why constitutions matter* (pp. 137–166). Stockholm: City University Press. Van Deemen, A. M. A., & Vergunst, N. P. (1998). Empirical evidence of paradoxes of voting in Dutch elections. *Public Choice,* 97(3), 475–490. Kurrild-Klitgaard, P. (2008). Voting paradoxes under proportional representation: evidence from eight danish elections. *Scandinavian Political Studies,* 31(3), 242–267. Miller, N. R. (2013). Election inversions under proportional representation, Paper presented at the Annual Meeting of the Public Choice Society, New Orleans.

[190] Kurrild-Klitgaard, P. (2005). Individ, stat og marked: Studier i rationalitet og politik. København: Forlaget Politiske Studier. P. 138-46.

vales what defines the result[191]. 3A manipulation is easier in smaller groups like parliaments' committees, the US congress, or the Roman senate[192]; Plott and Levine have shown in case studies and experiments how manipulation takes place[193]. However, 3A manipulation does happen in large groups. As for 3B manipulation, it has been shown that any non-dictatorial regime may be manipulated by strategic voting, and it seems likely that it occurs quite frequently[194]. 3C manipulation maybe is the most frequent of all[195]- examples, among many others, are constitutional reform[196] and parliamentary amendments [197]; but there is less empirical research as to the frequency of 3C manipulation, because it is more difficult to document it.

Impossibility results are an empirical reality in real democracies, Riker has argued that "we never know for sure just when—the social choice is as much an artifact of morally imperfect methods as it is of what people truly want"[198].

The empirical reality of the impossibility results in socio-political choices was an expected result from what we have learned about socio-

[191] Riker 1982., op. cit: 237; Plott 1967; Mckelvey 1976; Schofield 1978; Shepsley and Weingast 1981; Mckelvey and Ordershook 1984; Shepsle and Weingast 2012. Plott, C. R. (1967). A notion of equilibrium and its possibility under majority rule. *The American Economic Review,* 57, 787–806. McKelvey, R. D. (1976). Intransitivities in multidimensional voting models and some implications for agenda control. *Journal of Economic Theory, 12,* 472–482. Schofield, N. (1978). Instability of simple dynamic games. *Review of Economic Studies,* 45, 575–594. Shepsle, K. A., & Weingast, B. R. (1981). Structure-induced equilibrium and legislative choice. *Public Choice,* 37(3), 503–519. McKelvey, R. D., & Ordeshook, P. C. (1984). The influence of committee procedures on outcomes: some experimental evidence. *The Journal of Politics,* 46, 182–205. Shepsle, K. A., & Weingast, B. R. (2012). Why so much stability? Majority voting, legislative institutions, and Gordon Tullock. *Public Choice,* 152(1–2), 83–95.

[192] Riker 1982., op. cit.: 173f, 193ff; 1986; 78-88, 129-141. Riker, W. H. (1986). *The art of political manipulation*. New Haven: Yale University Press.

[193] Levine and Plott 1977; Plott and Levine 1978; Riker 1982., op. cit.: 174ff, 1986., op. cit.: 18-33. Levine, M. E., & Plott, C. R. (1977). Agenda influence and its implications. *Virginia Law Review,* 63(4), 561–604. Plott, C. R., & Levine, M. E. (1978). A model of agenda influence on committee decisions. *The American Economic Review,* 68, 146–160.

[194] Rikers 1982., op. cit.: 141ff; 167f; Gibbard 1973; Satterthwaite 1975. Gibbard, A. (1973). Manipulation of voting schemes. *Econometrica*, 41, 587–601. Satterthwaite, M. A. (1975). Strategy-proofness and arrow's conditions: existence and correspondence theorems for voting procedures and social welfare functions. *Journal of Economic Theory,* 10, 187–217.

[195] Riker 1986., op. cit. 150 f

[196] Riker 1986, op. cit 10-17

[197] Riker 1986., op. cit: 114.28.

[198] Riker 1982., op. cit: 115.

economic choices in the previous chapters. Any social choice – whether political or economic - requires institutions, and therefore the institutional arrangement does influence the result. Now, does that mean that institutions can by themselves fully define the electoral results? Only in extreme cases, in which in fact democracy collapses into an illegitimate authoritarian or an illegitimate authoritarian populist State. Excluding these extreme cases, what prevent institutions from fully manipulating the electoral democratic results is political competition, free press, a balance of powers i.e., a strong judicial system, a strong congress or parliament, constitutional laws that provide stability to the voting procedures – example by requiring to 2/3 of the votes of congress to be changed, and so on. Real democracies do not represent the "will of the people" because this is a non-achievable optimum; but that does not mean that the democratic political process is not meaningful, or that electoral democratic process can be efficiently replaced by institutional decisions. Institutions cannot replace people's participation just because they cannot realize the full complexity of people's preferences and values. A democratic society allows a more efficient and dynamic connection between individual preferences and values and the socio-political choices taken by the society. But it is a delicate balance. The quality of a democracy depends upon the quality of the institutional arrangement that sustains it; but that does not mean that institutions can substitute democratic procedures.

One of the required tasks of an extended CI's SCT is to investigate what institutional arrangement is the more adequate to obtain the best possible democratic result in a specific historical situation. Take as an example the US presidential election. We know that a Condorcet winner must likely exists, however it is pragmatically impossible to confront all the candidates in pair-wise voting to obtain the Condorcet winner unless we reduce the number of candidates substantially. And if we exclude many candidates, this increases the possibility of excluding what would have been otherwise the Condorcet winner. Therefore, in the real-world, there are tradeoffs that must be considered. Moreover, since a historical voting procedure already exists and has social acceptability, there is virtue in no changing it. A voting procedure's legitimacy rests in a social agreement accepted by the law and by the people. Therefore, there is also a real-world tradeoff between the theoretical superiority of a voting procedure that does not yet have social acceptability and a theoretically inferior voting procedure that already has social acceptability. In this trade off, social acceptability is in general more relevant than theoretical supe-

riority, not only because social acceptability is critical, but also because the stability of the voting procedure favor the individuals' learning of the voting procedure and of the relevance of their participation. Therefore, although it is necessary to improve the voting procedures, it should be done slowly, cautiously, and being very conservative as to the extent of the modifications proposed. Thus, although the actual US's voting procedure almost guarantees that a non- Condorcet winner will be chosen, there are not solid reasons to change it drastically.

The institutional arrangement in a liberal democracy precludes the leaders from abusing of their power due to a delicate institutional balance that, not only includes political competition and strong judicial and legislative branches of power, but also many other social government and non-government institutions like: independent central banks; autonomous government institutions; independent prosecutors; institutions managed by officials with a long civil service carrier, like for example the FBI; the free press; the army; the church; prestigious institutions from the civil society – such as the NBER (the National Bureau of Economic Research); universities and experts' institutes; and many others.

Strong stable institutions are critical. Institutions prevented ex-president Trump from his attempt to manipulate the system and remain in power. Real democracies operate in second-best results always, but that does not mean that any result is acceptable, nor that the process is fully manipulable. Even electoral democracies may eventually prevent extreme forms of abuse of power. In Mexico the PRI was in power seventy years, sustained by populist polices and fast economic growth, and had manipulated the voting procedure at will, and even had committed fraud. But as the economic growth slowed down and it was no longer possible to offer employment for the large majorities the PRI's power slowly went down. In 2004, the votes for the opposition were so high, that the PRI had to recognize that it had lost. People in Mexico learnt that they have the power to change the leaders and are now defending their democratic rights - as a recent crowded public manifestation, to defend the INE (the National Electoral Institute) against the executive power attempt to gain control over it, has shown.

Democracy is not a system in which the abstract "will of the people" rules. It is a very complex institutional system which: A) impedes the abuse of power of the leaders, and therefore social choices are strongly influenced by individuals' preferences + values; and B) takes into account the well being of the minorities in the society by given them equal rights of participation.

However, democracy is not the only political regime in which the leaders' choices are taking in favor of the communities' interests and values. Democracies have the advantage that they allow individuals' preferences + values to be able to be manifested, but this is only an advantage in societies like the Western ones in which the individuals have been diferentiated by their rights. In non-democratic regimes, is important to understand when they do take choices in favor on the comunity's interest and values and when they do not. Therefore, before we continue our discussion about social choices in democracies is convenient to have a broader view as to how political choices are taken in diverse societies, whether they are democratic or not democratic regimes.

POLITICAL CHOICES IN DIVERSE SOCIETIES

Democracy is being taught to us from a rationalistic idealistic perspective as the consequence of the immanent human rights, but it looks very different from an evolutionary institutional-historical scientific perspective. Human rights are an inheritance from a philosophical rationalism which presumed that humans had the capacity to understand universal moral values, among which we find the human rights. But since contemporary neurobiology has shown that humans do not have access to such universal moral values, democracy must be scientifically understood for what it is: a historical institution. Democracy is an institutional characteristic of certain societies at a given historical time. It has played a critical role in the fast growth of capitalism; because as we have seen, it is the changing preferences of the middle class what has defined the fast change in technology that has auspicated economic growth. But democracy is not the cause of the political rise of the middle class, but its consequence. Democracy is consequence of the change in the production process which became massive and caused the development of Burgos (or cities), the enlargement of the middle class and its rise to political power. Democracy happened in diverse ways in distinct nations, with had diverse historical and institutional backgrounds. It is the institutional arrangement and the corresponding conceptual system of the Western world, and in specific of each Western nation, the one that provided soundness and social acceptance to the voting procedures traditionally adopted in these diverse Western countries.

Interesting questions are: How did political choices were taking in the history of the West previously to democracy? And, how they are taken in today non-democratic societies? (The non-democratic societies include the World if it is contemplated as one culture). We will discuss these questions in this section and the next.

In the primary societies socio-political choices were taken by the small group in which all the members knew each other and had physical interaction among them. These societies were confronting a very unknown external environment; thus, they were very conservative, and insisted on maintaining the traditions that were known to work well and were very cautious in accepting any innovation. Thus, not major socio-political choices were allowed, because these societies were very worried of the potentially dangerous effects of social changes. Socio-political changes must ocurr because the pressure of surviving needs and the presence of external changes, whether in the climate, the soil, the presence of new social groups, or other causes. But social changes, due to the conservative attitude of these societies, happened very slowly by today's standards.

Socio-political choices may relate to the economic, the integrative, or the power social systems. In primary societies, the economic system was not yet fully differentiated, and therefore the socio-political choices related to the economic system were taken either through the integrative or the power systems. Socio-political choices related to the integrative system were taken by the small group deciding together. Socio-political choices related to the power system implied the use of force to maintain the internal social order; the use of force was critical in determining the size and composition of these primary groups, a characteristic inherited from their predecessors. Power force was also used to relate to other social groups, whether defending or attacking. But what distinguished the Homo sapiens was an intense social life, that produced a more advanced and sophisticated integrative system.

The individual in the primary societies is not differentiated and does not have any political or economic rights. And it is important to understand how the conceptual system of the primary societies, which we have been calling magic in other works, was developed. Primitive magic was not like what we call today magic in the Western world, it did have a ritual emotional component (like today's magic) that relate the primitive human to the external environment and created cohesion between the group members, but it also had a pragmatic component (unlike today's magic) that allow the survival of the group. For example, a new coming baby was received both by a tribe's sorcerer and by a midwife. Why was

the sorcerer required, and why were rituals so important in primary societies? Because, as contemporary cognitive psychology and neurobiology have shown, humans relate to the environment through emotions which preselect from the infinite external stimuli the ones that are relevant for survival. The selected stimuli are then processed by the human senses and storage as images. The critical point is that humans' reason operates in external stimuli already preselected by the emotions. This is a survival feature inherited from our predecessors. Emotions are evolutionary inherited survival patterns to relate to the environment. Thus, the primary humans' relationship with the external world had to be emotionally based. In any society, as we had seen, there is an institutional arrangement that defines the pragmatic survival, but it always has a corresponding conceptual system which is emotionally and historically based, that define emotional traditions and concepts that provide the cultural basis of whatever is reasonable in the conceptual system in question. This is a fundamental point to realize: human's reasonability is always bounded by the conceptual system of reference. That is one of the reasons why deliberation between groups with different conceptual systems may not always be fruitful, and many times ends up in a power confrontation.

As the group expands and task are differentiated, the primary societies changed into traditional societies. In these traditional societies, due to the complexity of the tasks required, the individuals became differentiated in their social duties, although they still did not have political or economic rights. There are diverse routes of differentiation taken by the traditional societies that will be discussed in the next section; the Western route is only one of them. In each one of these routes of differentiation, socio-political choices had distinctive features. However, what all these traditional societies have in common is that, given the increase size of the social group, although popular participation continues existing, the role of the leaders in defining the fundamental socio-political choices becomes critical. While in the primary societies magic and rituals were fundamental, and the relationship with the external physical and biological universe was a fundamental determinant of socio-political choices; in the traditional societies, with increasing control over the external environment, socio-political choices related to the internal social life of the community increased in importance. Thus, in parallel to the magical connection with the external world some of the large traditional societies developed a social rationalism (a reasonability particular to each conceptual system) as a method to define the characteristics needed to maintain social order. This is explaining why, in other

works, we have argued that the conceptual system of the traditional societies is the rationalism; although the degree of influence of the newborn social rationalism versus the old emotional magic (that remained highly influential through the religions) varies from one culture to another.

It is only in the Western advanced societies that the individual is differentiated by his political and economic rights, which happens historically because once the Burgos, or cities, required by the massive new production, were created, there was a need to define how will they be politically organized. In the beginning they were seen as strengthening the power of the Kings (which before were only one more feudal lord), Hobbes will argue that it is in the benefit of the citizens to maintain social order by recognizing the Kings. But as the cities grew in power and influence, they claimed their own political power, and with Rousseau the democratic power is already conceived. A critical issue to realize is that democracy was not born in a vacuum, but within an institutional historical context defined by social rationalism and by the still influential primary magic (which have become religions). The institutional historical traditional arrangement of each one of these Western traditional societies was where democracy started, this explains why democratic process differ so much between diverse Western countries. It explains why the chamber of the lords in England is not elected democratically, why in the US the votes of Eastern states citizens are overweighted, why the US presidents after a public speech most often mentioned God, and why today a global democracy is a historical impossibility.

Democracy is a consequence of the political success and expansion of the middle-class. And the middle-class expansion is critical in the enlargement of the Western markets, which, as Smith argued, is what generates the fast technological development which supports the rapid economic growth of capitalism at the global level. Democracy, being a consequence of the human rights' recognition, has been associated with promoting respect for the individual life and the conditions of living of everyone, although this humanism was restricted to be implemented mainly only within the limits of the national Western States. And democratic individualism has promoted individual creativity, which has been a source of scientific and technological knowledge, and artistic expansion. Thus, there is a very good side of democracy. But it must be realize that it was developed in diverse ways in distinct developed economies, and that in each case it was associated with both: 1) Previous traditional institutions that contribute to maintain social order (like the church and the religions,

traditional customs and many others); and 2) with the development of new institutions that reinforce the new emerging democratic social order such as free press, a strong and independent Judicial system, a strong congress and many others.

Social change is the consequence of old institutions, technological development, and individual creativity all through the social system. Notice that democracy and individual voting is only one of the components in all this process. Can we change our social world, in any desired direction? Yes. But at a slower pace that we may wish. Democratic choices must cope with the fast social change produced by technological development which has a dynamic of its own, and democracy is embedded in old institutions – many of which clearly delimit how far democratic choices can go. Our societies are the reflection of their own history, strongly embedded in conceptual values and institutions that necessarily constrain today's social democratic choices.

Political choices in any society happen within its given historical institutional arrangement and its corresponding conceptual system. Therefore, they ocurr in a traditional setting which define: 1) What decisions are taking by the institutions (institutional officials or leaders); 2) what rationality (reasonability) is applied to the rational deliberations; and 3) how do people participate. The role of institutions varies from culture to culture, and it is distinct in different historical periods even of the same culture. The rationality (what is reasonable), applied to rational deliberations, depends upon the conceptual system of the culture under consideration. Humans do have a reason and they use it to analyze problems and to define opportunities, but reason does not have access to universal essences, reason can never know the true reality. Humans' reasonability operates within the emotional background of the conceptual system of beliefs of a given culture in each point in time. So, the rationality applied also varies between cultures and across time. And finally, how people participate is also defined by the institutional arrangement of the given culture at a specific time.

The particularity of liberal democracies is that humans are given individual political rights of free expression, and free voting, and economic rights of private property, and the free production and exchange of goods and services. But these human rights happened within a given historical institutional arrangement and its corresponding conceptual system. Therefore, institutions continue to be critical in democratic life; the reasonability used for rational deliberations in democracies happens within the conceptual system of the Western societies; and democratic people

participation occurs through a selected voting procedure that reflects traditional balances of relative power amongst groups and individuals, moreover people participation happens by other traditional channels (besides the new won rights of political voting, free expression, and market participation) like for example through the organized civil society.

A critical question in democracies is whether people vote based in what they think is best for the nation, best for them individually, or a mixture of both. We have significant scientific evidence that people are socially responsible, it has been shown by behavioral economics and by many other empirical experiments in social psychology. However, we know because of the experiments of the psychology of attachment that people's belonging is stronger to a small group, towards which the individual is more responsible than with the rest of the society. Moreover, while it is true that social responsibility can be extended conceptually to a large social group (still somehow conceptually defined as the ingroup), as the empirical evidence of large social expenditures in western countries show; it is also true that such extension has limits, as the evidence of the very low levels of the international aid for the poor shows (because they are no longer conceptually defined as ingroup members). Therefore, because empirically we know that belonging is always stronger to the ingroup nearer to us, this implies that even individuals who are socially responsible towards a conceptually extended ingroup, are even more responsible to smaller groups within the extended ingroup. Thus, they will always vote partially in function of the interest of the small group nearer to them. Not democracy, not any other political system, can get away from the conflict between the interests of the small groups that constitute a larger group. This is another one of the reasons why deliberations between individuals and groups may not always be resolved – simply because they may have opposite interests.

Large groups contain small groups nor only with distinct interest, but also belonging to a different conceptual system. All the large empires in history confronted this dilemma. Thus, small groups may not agree between them through deliberation, nor only due to divergent interests, but also because they have different conceptual backgrounds as to what should or should not be done. A simple example, whether women should or not be allowed to cover systematically their faces in public (a critical social choice in some European countries on which deliberation does not easily work, in many European countries related cases got to court). The possible solution is through an enveloped conceptual system and its corresponding institutional arrangement, which based in tolerance (to allow

the common living needed in the large group) establishes institutional rules of behavior (which could be written as a law, or simply known to be accepted behaviors – customs) that provides a pragmatic social solution to divergent interest and points of view between small groups. Deliberation may have its virtues in small groups, but in large groups its benefits are clearly significantly more limited, because large groups are composed of small groups with divergent interest and distinct conceptual systems.

And in any case, deliberation is not the general way to get out of the impossibility results in large groups. Real democratic societies cannot get away from the impossibility results through rational deliberation, it is just too difficult to organize it systematically for the whole society in large groups. In the real world, democracies choose the winner by accepting their own traditional specific voting procedure, which, as we have seen, almost always, violates a Condorcet winner. And these specific (particular) traditional methods, necessarily partially reflect a balance of powers between the interest and values of distinct social groups. As for example, the confrontation between democrats and republicans in the US, about the voting procedure to use, clearly shows. Moreover, whenever an institutional solution based on traditions or new rules of the integrative system cannot be found – nations may breakout, and the conflict resolution may take place through the power system, like it happened in the old Yugoslav.

The discussion as to how political choices are taken in non-democratic societies is particularly relevant because: 1) Only 13% of the world's population lives in liberal democracies; and 2) the world seen as one culture is non-democratic.

The liberal model's proposal, that political choices ocurr in an institutional social vacuum through aggregating preferences + values of individual agents, while useful for certain analytical purposes, clearly is far away from any social reality. First, as we have discussed such aggregation is theoretically impossible. Second, any democracy is embedded in a historical institutional arrangement, and its conceptual system, that critically influence the democratic procedure used and therefore the result obtained. Third, the majority rule is not the goal of democracy: it can be argued that to a large extent the quality of a democracy can be measure by the counterbalances it possesses to be able to allow for the social satisfaction of minorities interests and values[199]. Fourth, the world today does not live under democracy, to

[199] Sen argues that "The majority method does have a good deal of plausibility for some types of problem, but making choices over differences in income distribution is not one of them. This would undermine its claim to be a possible route to 'social welfare', or, for that

understand how social choices are taken by 87% of the population, and at the world level, we need to understand how political choices happen in non-democratic societies and how they can be institutionally improved.

Political Choices in Distinct Routes of Differentiation

We can identify at least seven main routes of differentiation in the traditional societies (each one of them of course having many sub-routes; almost as many as there are real distinct societies): 1) The Indian South Asian; 2) the Neo-Confucian North Asian; 3) the Greek-Roman rationality; 4) the Christian; 5) the Muslim; 6) the Western Society; 7) hybrid routes. Each one of these routes became clearly distinct as to its conceptual representational construction of the human life and the existential universe. Consequently, socio-political choices are taken in a different manner in each route. In what follows we will describe each one these routes of differentiation.

1) The Indian-South Asian route is closely related to the magic of the primary societies. The main driver is existential belonging. In the Indian religion there is not a personal God, there is reincarnation, and everything that exists has a defined order. The social order is defined by the integrative system that gives each social class (distinct castes) very well-defined duties. But in contraposition to the primary society, the individual is differentiated by his social duties, and the individual becomes responsible to obtain by himself existential significance. In Buddhism, existential significance is individually obtained through illumination. The illuminated individual, is the one that through individual meditation (usually socially assisted), understands at a non-rational mystical level the two fundamental principles of the universal existence: I) That everything that exist is interdependent, and that it started to exist in its interdependence; and II) that therefore, the individual existence is just an illusion. Illumination then, is the mystical recognition of the ordered universe previously alluded to by magic; in which

matter, towards 'social justice'. Arrow (1983, p. 87) has suggested that 'perhaps the deepest motivation for study of the theory of social choice, at least for the economist, is the hope of saying something useful about the evaluation of income distributions. If this is indeed so, then the promise of majority rule as a social choice procedure is clearly hopeless, even if problems of intransitivity – or voting cycles – were never to arise. Sen, 2018, op. cit. p. 271.

living and not living things exist in an orderly way, and in which death has no particular significance. The Indian religion has been and still is highly influential in many countries in South Asia. The society is ordered by castes which have very well-defined social roles. The society is conservative like the primary societies, and social change happens slowly. When needed, socio-political choices are taken by the Kshatriyas (rulers, administrators, and warriors; also called Rajanyas). The Brahmins (priestly people) are socially highly influential. All castes are obliged to respect the social traditions. Institutional traditions play the fundamental role in socio-political choices; reasonability is always interpreted as related to traditions; and social participation is allowed but limited by the caste system.

2) The origins of the Neo-Confucian North Asian route go back to Buddhism traveling north to China. But China was becoming a big empire, holding many cultures that lacked the Indian social order based on the strict definition of the castes' social duties, and Buddhism was a personal religion – therefore, social order had to be based on something else. Confucianism provided the answer with its rational definition of social obligations. The most important social relations for Confucius are five: ruler and ruled, father and son, husband and wife, elder and younger brother, and friendship. The objective of the ethics of Confucius is to develop social harmony between individual interests and those of society, always giving priority to the common interest. China already showed the need of a more abstract rational social order. Neo-Confucianism was, and still is, highly influential in many countries in North Asia such as China, Japan, and Korea. In Neo-Confucianism social order (social belonging) is defined by Confucius' obligations, while existential belonging is defined by Buddhism and Taoism. Communist China's social order is to large extent still explained by Neo-Confucianism, which makes it very different from Russian communism. China's culture was more dynamic that the Indian one, because it had to put together a large empire, and more frequent socio-political choices were required. In Neo-Confucianism socio-political choices are taking by the rulers, but a distinctive feature is that the rulers have very well defined and strict obligations to represent well the interest of the ruled

and are under the duty to maintain close contact with them. In socio-political choices the institutional traditions are highly relevant, particularly those related to the social obligations of the individuals and of the rulers; reasonability is understood in terms of a Confucian view of a harmonious social world; and social participation is allowed, but always in terms of searching for the Confucian social harmony.

3) The Greek-Roman rationality arose in an historical stage when, given the relevance of iron in arms production, Persia forbade the private production of iron, which became an exclusive prerogative of the State. The consequence, given the many private productive uses of iron, was the emerging production of iron outside of Persia in small factories. And as the new factory owners needed to design a new form of government, given the lack of a traditional one, the situation gave rise to Greece's democracy. However, the Greeks doubt that democracy by itself could lead to social order. Therefore, the Greek answer was, as in China, a social order based on rationality. However, it was a different rationality than the one of China. Plato's rationality provided the basis of what would become the Greek-Roman-Western civilization. Social order in Plato's and Aristotle's social theories was given by reason, they mistrusted the consequences of a non-rational democracy. The power of the Senate in Rome (elected by the minorities) was consequence of their view. The Greek-Roman rationality defined social order, but existential belonging was defined by a magical mysticism in which the living and the dead, and the gods and the humans, enjoyed all kind of magical powers and confronted each other. Hercules, a semi-god son of Jupiter, for example, is famous for choosing to be a human instead of a god, and for winning, as human, battles against many gods. The Greek -Roman world, was like the Chinese very dynamic and frequent socio-political choices were required. In the Greek-Roman rationality socio-political choices are taken by those with rational knowledge. While the Chinese rationalism put an emphasis in the relation of obligation from the rulers to the ruled, the Greek-Roman rationalism put an emphasis in the rational knowledge of the rulers. The high social ranking of the holders of knowledge in the Greek-Roman world was a precedent of the high ranking

occupied by the elites in the Western countries; reasonability is understood in terms of a Plato's views of a rational-essential social world; and social participation is allowed, but always in terms of searching for Plato and Aristoteles' social rationality.

4) The demise of Rome gave rise to the powerful Christian church of the feudal times. The Christian route of differentiation was defined by Saint Agustin and particularly by Saint Thomas, who stated that reason - through mystical faith - could read the rational essences (Plato's) which were conceived as being contained in the mind of the creator (God). The church was the route for individuals to access the understanding of the true essential world. Reincarnation was substituted with eternal life, and magic with religious mysticism. Christianity gave an enormous social power to the Church, which became one of the main guarantors of a social order based on the moral-Christian behavior of the individuals. Kings' power was thought of as having a divine origin. And divine Kings shared with the church the highest social power. Kings however were for the most part feudal lords fighting other feudal lords for the throne. And it is not until the emergence of the cities that Kings became truly powerful, since the control of the cities allowed them to out-power other feudal lords. In the Western countries the all-powerful Kings did not last very long, because eventually the growing power of the cities challenged them, and democratic forces brought them down. However, in some countries like Russia democracy never came, instead they entered a communist State in which autocratic rulers remained all powerful. Communism in Russia has been to some extent a continuation of the all-powerful Czars; and because of this, it is very different from the kind of communism practiced in China.

In the Western feudal times socio-political choices were taken by the feudal lords and the Kings under a strong influence by the church, which held the power of the State directly in some countries. The power of the divine becomes unquestionable and gives a privileged role to the rulers, whose power was shared with the church. Religious institutional traditions are in general very influential, reasonability is understood in religious terms, and social participation is allowed but it must comply with religious' life requirements.

5) The Muslim route is characterized by the fact that, instead of Christ, Muslims believe in Muhammad. The Muslim religion is a modified version of Christianity, adapted to the military needs of the times of a particular Arab culture. The Muslim religion gives more precise obligations to the individuals; and glorifies military actions, giving eternal life to the military heroes. The religious State is still highly influential in many Muslim countries today. The divine power of the State is unquestionably, and any social deliberation must ocurr in terms of what the Coran says. The power of the rulers in the Muslim route is even greater than in the Western feudal route. In socio-political choices the religious institutions are decisive; what is reasonable is religiously defined; and social participation is allowed, but always under the guidance of the teaching of the Coran.

6) The Western contemporary societies are a differentiation of the Christian route. In Western societies, the individuals in addition to be differentiated by their duties are also differentiated by their rights. We have called the conceptual system that underpins the way these duties and rights are established, "harmony". Harmony is a form of rationality; in which reason has access to the understanding of the whole existential world, except the social order – which instead of being understood by reason, is the consequence of democratic participation. Protestantism is highly influential in some Western societies. In Protestantism the power of the church is diminished because individuals can have access to God directly through their work for the community. In Protestantism then, existential belonging is obtained through social significance – working for the community. As we mentioned before, harmony is derived from rationality, because the individuals' rights are differentiated by a rational method. Human rights are conceived as being in God's mind, and humans as having the capacity to understand them with their reason. Human rights, the rights of the children of God, include individual freedom which covers: the political freedom to vote and choose social authorities, to express ideas, and to own, produce and exchange economic goods and services.

The Western world becomes highly dynamic and socio-political choices become more frequent. The role of institutional traditions remains fundamental, but secular life is separated from the religious

life. Reasonability becomes related to human rights. And social participation is allowed through democratic voting, free expression, private property and free participation in economic production and the exchange of goods and services. However, other traditional forms of social participation like social manifestations and the religious life continue to be very relevant. And new forms of social participation are created through the emergent civil society.

7) Hybrid routes. Today, most of the traditional world is under the influence of the Western culture. Most countries have been under the influence of Western's democratic values, and some others have been influenced by Western's communist ideals. Most routes today are hybrid. India in addition to the Indian religion has been influenced by the Western democracy, mainly through the English occupation, and it has also been influenced by the Muslim tradition. China is a hybrid result between Neo-Confucianism and communism. Russia is a hybrid result of the all-powerful Czars and communism. Japan and South Korea are a hybrid result of Neo-Confucianism and Western democracy. Africa is a hybrid result of primary "magic" and Western democracy. Latin America is a hybrid result of many influences: the authoritarian old Spanish culture, Latin America's indigenous people's primary culture, the primary culture of imported African slaves, Western democracy, and Western communist ideas.

The previous paragraphs do not pretend to summarize the history or actual diversity of the conceptual systems and their corresponding institutional arrangements that have existed or exist today in the world. The goal has been rather to show the enormous diversity of these conceptual systems. Each one of the mentioned seven routes of differentiation is very different from the others, and additionally in each route there are innumerous variations. This complexity in the humans' representational understanding of reality is an evolutionary source of social conflict, the resolution of which is provided by envelope conceptual systems and institutional arrangements, that become however more and more fragile as they get larger. Today most big countries, as did many old empires, include diverse populations with distinct cultural backgrounds. And the world is extremely diverse, making it very complex to design global institutions and acceptable international conceptual systems.

Despite the growing Western influence today the world seen as one culture is non-democratic, and as mentioned before only 13% of the

world's population leaves in liberal democracies which means that most socio-political choices are taken today by: 1) Traditional institutions that differ from the Western ones; 2) by reasonability social considerations which are not based in the human rights that characterized the humanism of the West; and 3) that social participation based in Western's political and economic freedoms only ocurr in limited number of countries, and therefore social participation in most of the countries of the world, and in the world seen as one culture, still significantly happens along traditional institutional lines.

Democracy, Authoritarianism, or Authoritarian Populism: A Delicate Balance

Democracy was born in Greece together with rationalism. The Greeks and the Romans had a role for democracy, buy they conceived social order as coming from rationalism. Western democracy was born because of human rights that had a rationalistic background. All the great social thinkers of modern times, like Locke, Kant, Smith, and others understood that human rights were needed nor only to establish democracy, but also to protect the individual and the minorities from the potential unmerciful will of the majority. Not only a general voting procedure to aggregate the votes of the individuals to define the will of the majority is a theoretical impossibility; but what is even more relevant is that even if it was possible the democratic rule of the majority is not conducive by itself to the establishment of a social democratic order. Social order in the Western societies is established by many historical social institutions that provide stability to the society, like the church and the religions, the communities previous customs and so forth. Democracy is not institutionalizing the rule of the majority, but the establishment of a new complex institutional arrangement that allows for social order in the community in question. The balance of powers, constitutional restrains for the constitution to be modified easily, free press, and so forth, represent ways to provide a democratic system with the stability required for it to be able to provide social order.

Riker has distinguished between liberal democracy and populist democracy. In liberal democracy he asserts, the function of voting is to control officials – through being able to replace them, and no more[200].

[200] Riker 1982., op. cit.

Instead, he argues, for populist democracy the social contract creates a moral and collective body, where each citizen votes considering only the common interests. He summarizes populism as the assertion that voting participation in rule making is necessary for liberty. The rules thus made must be respected as right and proper because they embody that liberty. Were they not so respected liberty itself might vanish. In the liberal view instead voting generates liberty simply by restraining officials. For the populist the government necessarily represents the people, while for the liberal the government may not do so. Riker argues in favor of liberal democracy and proposes that populist democracy may lead to authoritarian states.

The impossibility results tell us that the will of the people cannot be found, and therefore there is room for manipulation. Therefore, there is no question that government's officials may argue that they represent the will of the people while they really may be representing their own interests and defending their own values. The liberal view is that the function of voting is to control officials though being able to remove them. It is however clearly insufficient. Given the impossibility results, officials may change the voting procedure to reelect themselves. Thus, given the impossibility results, a democracy, in the extreme case, may collapse into an authoritarian State, in which officials keep changing the voting procedure at their will to continue reelecting themselves. In the real life, democracies may become hybrid authoritarian-democratic regimes, for example, in Mexico one party reelected itself 70 years, and in Japan 50 years. Moreover, voting procedures change much more often in Italy (since the 1990s) than in Britain or the US, "gerrymandering" of electoral districts being the perhaps most well-known example[201]. What can stop officials from serving their own interest and imposing their own values is not the fear of not being reelected, but the fact that they cannot change the voting procedure at their convenience all the time because there is political competition that impedes them to do it. And political competition can only work if there is an adequate institutional arrangement, including a strong independent judicial power and a strong free press, although the church and other institutions of the civil society are also required to provide stability and prevent abuses from government officials. It is clear, that the quality of the democratic result depends upon the quality of the institutional arrangement that supports it.

[201] *Kurrild-Klitgaard, P. Empirical social choice: An introduction. 2014. Online at https://mpra.ub.uni-muenchen.de/53323/ MPRA Paper No. 53323, posted 01 Feb 2014 15:53 UTC.*

Riker however has an important point about populist-democracies. Authoritarian populist regimes claim: 1) That the will of the people is morally sacred because people is moral and wise once they are well informed; and 2) that they represent the people, and encourage frequent public opinion surveys, and frequent "democratic voting" to prove that they represent the will of the people. They of course manipulate the voting procedure and the constructions of the public opinion surveys at their will.

Populist democracies claims that the will of the people is the unique source of social truth that must illuminate social choices. Their claim is false because in large groups to obtain an adequate level of understanding on the critical issues involved in each social choice is theoretically and practically impossible, that is why representative democracy exists. Institutional official representing the interests and values of the community are better prepared to take such decision. Brexit's failure is consequence of Boris Johnson's populism. It is not the kind of decision to be taken by a SCT mechanism, see chapter two. Populist democracies are misleading and dangerous.

Democracies due to the impossibility results are manipulable and, due to a weak institutional arrangement, may collapse into authoritarian populist States; what may prevent them from doing so is a solid institutional arrangement capable to guarantee fair political competition.

The institutional arrangement task is not only to allow fair political competition, but also to maintain a balance of powers such that officials from one branch of power are vigilant of officials belonging to another branch of power. Complex institutional arrangements include autonomous governmental institutions, and the encouragement of supervising institutions belonging to the civil society. Institutions must be vigilant of each other.

Deliberation will not solve the potential problem of a democracy collapsing into an authoritarian State or an authoritarian populism, what is needed are real institutions that supervise the officials and prevent them from acting in their self-interest and imposing their own values. Political competition reflects disagreement as to what to do with the society in question, which reflect social conflict between divergent interests and distinct values. The contribution of democracy is that it proposes a new social mechanism to solve disagreements. But this mechanism only works properly if there is a strong institutional arrangement.

As we have mentioned the impossibility results mean that in a democracy an optimum that truly represents the "will of the people" cannot be

found; but there are however second-best options which can be ranked as to how far the given institutional arrangement contributes for the social participation of the people, through their individual votes, to make a difference. This is in fact how Lührmann, Tannnberg, and Lindberg's Regimes of the World (RoW) classify the political regimes[202]. These authors using data from the Varieties of Democracy (V-Dem) project[203] distinguished between four types of political regimes: closed autocracies, electoral autocracies, electoral democracies, and liberal democracies; which definitions are provided in Table 5.4. Notice, that only the liberal democracies have a proper balance of powers and are therefore more difficult to manipulate.

Figure 5.1 shows the percentage of people in the world living under each political regime since 1800 up to 2021. As it can be appreciated in table 5.5 in 2021, only 13% of the population lives in liberal democracies, down from 16% in 2011. It is also worth noting that the population living in autocracies is up from 49% in 2011 to 71% in 2021. A way to look at the data in Table 5.4, from our interest in here, is that in 2021 26% of the population lived in closed autocracies that do not hold any electoral process, 60% of the population lived in societies that do hold electoral process but that are highly manipulable, and only 13% of the population live in liberal democracies in which, although manipulation still exist, it is constrained by the balance of powers that guarantees an acceptable political competition. Therefore, social choices with a low degree of manipulability, and that are therefore significantly influenced by the aggregation of individual votes, only happen for 13% of the global population. For the rest, social choices are significantly manipulated by the leaders of the institutions. Therefore, it is critical to develop a more comprehensive CI's SCT capable to explain how institutional leaders influence or decide critical social choices.

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[202] Lührmann, Anna, Marcus Tannnberg, and Staffan Lindberg. 2018. Regimes of the World (RoW): Opening New Avenues for the Comparative Study of Political Regimes. Politics and Governance 6(1): 60-77

[203] Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg, Jan Teorell, Nazifa Alizada, David Altman, Michael Bernhard, Agnes Cornell, M. Steven Fish, Lisa Gastaldi, Haakon Gjerløw, Adam Glynn, Sandra Grahn, Allen Hicken, Garry Hindle, Nina Ilchenko, Katrin Kinzelbach, Joshua Krusell, Kyle L. Marquardt, Kelly McMann, Valeriya Mechkova, Juraj Medzihorsky, Pamela Paxton, Daniel Pemstein, Josefine Pernes, Oskar Ryd en, Johannes von Römer, Brigitte Seim, Rachel Sigman, Svend-Erik Skaaning, Jeffrey Staton, Aksel Sundström, Eitan Tzelgov, Yi-ting Wang, Tore Wig, Steven Wilson and Daniel Ziblatt. 2022. VDem [Country–Year/Country–Date] Dataset v12. Varieties of Democracy (V-Dem) Project

TABLE 5.4 POLITICAL REGIMES OF THE WORLD

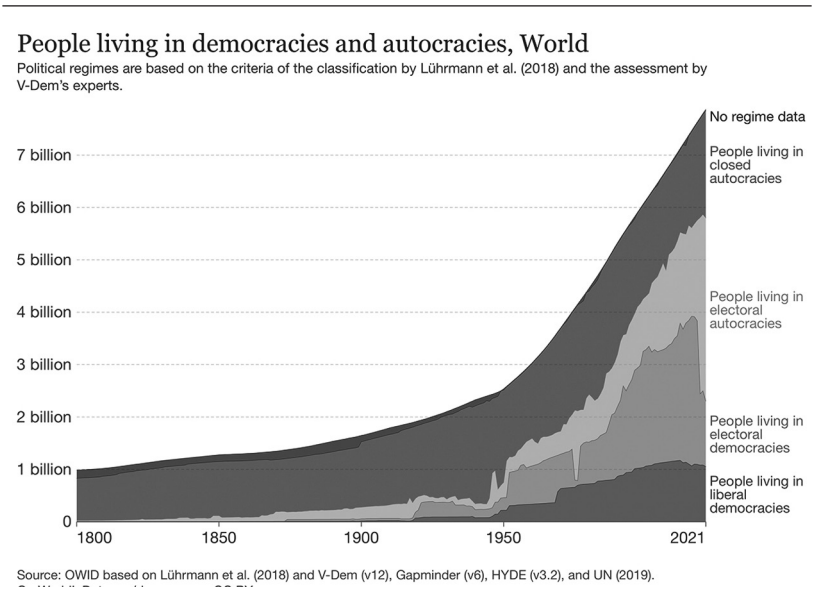
In **closed autocracies,** citizens do not have the right to choose either the chief executive of the government or the legislature through multi-party elections.

In **electoral autocracies,** citizens have the right to choose the chief executive and the legislature through multi-party elections; but they lack some freedoms, such as the freedoms of association or expression, that make the elections meaningful, free, and fair.

In **electoral democracies,** citizens have the right to participate in meaningful, free, and fair, and multi-party elections.

In **liberal democracies,** citizens have further individual and minority rights, are equal before the law, and the actions of the executive are constrained by the legislative and the courts.

FIGURE 5.1 (POPULATION) PERCENTAGE POR NUMBER OF PEOPLE



Comes from https://ourworldindata.org/less-democratic

TABLE 5.5 PERCENTAGE OG PEOPLE LIVING IN DISTINCT POLITICAL REGIMES

	Year			
	1800	1950	2011	2021
CA	82	69	23	26
EA	2	12	26	44
ED	0	9	34	16
LD	0	9	16	13
	0	0	0	0
A	84	8	49	71
D	0	18	50	21

Source: Own calcularions based in fig 5.1

A= Autocracy D= Democracy

C= Closed E= Electoral L= Liberal

Legitimate and Illegitimate Political Regimes

Let us further discuss what a liberal democracy means. It implies that the officials are obliged to largely represent the people's interest and values, instead of their own; because a political competition, sustained by the institutional balance of powers and other institutions, forces them to do so. And in addition, citizens have further individual and minority rights, and are equal before the law. Therefore, in liberal democracies, although most social choices are taken by institutional officials, and not through participatory democracy, institutional officials' manipulations of social choices are relatively low, and therefore although taken by the institutions, most social choices do reflect the preferences and values of the electorate.

However, as we have seen for 26% of the world's population (autocracies) social choices do not relate to any electoral process, for another 44% (electoral autocracies) the institutions' manipulation is relatively high and for 16% (electoral democracies) the institutions manipulation is relatively medium. The implication that must be learnt from the previous analysis is that: the institutions influence in defining social choices worldwide is determinant.

Moreover, the classification in figure 5.1 and table 5.5 is made from the point of view of the degree on which societies hold Western's democratic values. But there are other classifications that are relevant, in particular is relevant to distinguish between: 1) Illegitimate political regimes (which may include or not electoral process), where illegitimate power violates the conceptual system of a community, which is dominated by force; and 2) legitimate regimes (which may include or not electoral process) in which the authority that is exercised is congruent with the conceptual system of the society in question. The absence of a democratic system based on individual voting does not always result in an illegitimate regime.

It is necessary to differentiate historically, and in non-Western contemporary societies, other legitimate forms of political participation (besides liberal democracies) that do not correspond to the West's political development. For example, in the indigenous villages in Chiapas, in southern Mexico, people's decisions are made communally (there are no individual decisions, and the individual voting process is not the axis of the political system); however, the social process of decision-making has legitimacy and recognition from the inhabitants of the villages. But if socio-political legitimate social choices can be made without the exercise of individual voting, then: What is it that makes them legitimate? What guarantees that they are taken for the benefit of the community and not for the benefit of rapacious leaders?

Political legitimacy, like any other concept, depends on the social conceptual system of reference. In primary societies the individual does what must be done, and he does not have individual political freedom in the Western sense of decision making. But, there is still a clear distinction between: 1) Legitimate harmonious primary societies, where individual life is communal, and the individual feels fulfilled, has belonging and emotional stability, and conceives of himself as an element of the social political process; and 2) the illegitimate societies conquered by force, where individuals are enslaved or forced to carry a social life that violates their traditions of belonging (that is, their own conceptual system and its corresponding historical institutional arrangement).

In traditional societies, as opposed to primary ones, there is already individual freedom of decision, but only to be used to adequately comply with the social duties imposed by the society. In these societies, there is no political freedom in the decision-making sense of the West's individual rights. But again, there is a clear distinction between legitimate and illegitimate societies. In legitimate traditional societies, the individual, by perform-

ing his/her social obligations, participates in the social process of the society in question. Individual and group political participation occurs, and it is recognized as a fundamental source of social stability; but the participation is not through individual vote, and it is not the "will of the people" what defines the legitimacy of the political system. For example: 1) In Muslim societies, it is recognized that the open discussion of the Koran in the community provides legitimacy and guides and delimits the social choices to be taken by the institutional leaders; 2) Confucius saw in the proper relations between the individual, the family and the State the basis of good social functioning – the rulers are constrained and guided in their decisions by their duties to the ruled, and the ruled had the right to be heard whenever it involves the well-being of the community; 3) in Buddhism, meditation happens individually (although socially stimulated), but it leads to love for others, and so it fosters social stability and provide legitimacy; and 4) in Christianity the individual moral behavior, of the religious human, is the key corner stone that provides legitimacy to social choices.

Individual political participation in legitimate traditional societies in the form of communal discussion is allowed. And what restrain the leaders from taking social choices disadvantageous to the community is a sophisticated traditional institutional arrangement and its corresponding conceptual system that guides and delimits the social choices taken by the leaders. In all traditional societies social participation by the community has always put a limit to decisions taking by the leaders. Take for example the recent case of the Chinese government's very strict Covid policies that caused social manifestations that forced the leaders to reverse them[204].

However, direct individual participation in the political decision-making process is not allowed in the traditional societies for everyone. In many of them, it is allowed only to a few; for example, the Roman Senate. But it is always possible to distinguish in these societies between a legitimate political regime, and one that is not. The Roman Republic represented by the senate was a legitimate regime, while later the imperial Rome was not.

In general terms: the political regime is legitimate when it is congruent with the conceptual system of reference. If the political regime is legitimate, political freedom in the sense of decision-making is always granted by the society's conceptual system. When political freedom is granted only to a minority, as in Greece or Rome; this minority, for the social order to be legitimate, is obliged to exercise their political freedom to decide

[204] The Economist, news from 17 november, 1 december and 6 december.

for the benefit of the community. The social order is illegitimate when it is incongruous with the conceptual system of reference; in these cases, a dictator, or a given group, exercises the political power to decide in favor of their own selfish benefits.

There has been a large literature discussing the issue of whether an authority is legitimate. Anarchists[205] have argued that the duty of individual moral autonomy is incompatible with the duty of obeying a political authority, and that therefore all authority is illegitimate. The problem with this position is that cannot explain the existence of the State and the obedience of most citizens - which is a reality. To explain this reality, we are left with two possibilities. 1) That the "de facto" authority deserves the obedience of the de facto subjects[206]. In this line of thought, some writers have argued that the de facto authority is based in its capacity to solve various coordination, assurance, and free rider problems[207]. 2) That the obedience of most citizens is based upon individual ethical considerations, and that the State authority is normative in nature.

We have argued elsewhere that social order cannot be sustained in the long run if it is not normative, and that it requires citizens who accept the ethical values that constitute the social conceptual system. If citizens do not behave ethically, there is no State that has the capacity to establish social order by force[208]. Most thinkers have taught that legitimate authority in a normative sense is required[209]. The moral justification of the exercise of authority may be due to 1) morally justified coercion; 2) moral capacity to impose duties; and 3) the right to rule[210]. The right to rule usually implies obedience (a moral duty to obey) by the subjects of the State, and non-interference by other States[211]. There are four types

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[205] Wolff, Robert Paul, 1970, *In Defense of Anarchism,* New York: Harper & Row.

[206] Hobbes, Thomas, 1668, *Leviathan,* Edwin Curley (ed.), Indianapolis: Hackett Publishers, 1992. Hume, David, 1748, "Of the Original Contract," in *Hume's Ethical Writings,* Alasdair MacIntyre (ed.), London: University of Notre Dame Press, 1965. Austin, John, 1832, *The Province of Jurisprudence Determined,* H. L. A. Hart (ed.), London: Weidenfeld & Nickolson, 1955.

[207] Hurd, Heidi, 2001, *Moral Combat,* Cambridge: Cambridge University Press.

[208] See Obregon Carlos 2019, *Social Order: Harmony and Conflict in Human Societies*. Amazon.com also available at Research Gate.com

[209] Hart, H.L.A., 1961, *The Concept of Law,* Oxford: Clarendon Press.

[210] (Ladenson 1980) Ladenson, Robert, 1980, "In Defense of a Hobbesian Conception of Law," *Philosophy and Public Affairs,* 9: 134–159.

[211] Buchanan, Allen, 2004, *Justice, Legitimacy and Self-Determination,* Oxford: Oxford University Press.

of theories about the moral duty to obey: consent theories[212], reasonable consensus theories[213], associative obligation theories[214], and instrumentalist theories[215]. The instrumentalist's argument is that subjects are better off by complying with the authority, but this is not always the case. Consent theories have a broader scope, but still are insufficient as many have argued that legitimacy must also imply that the State is just – that it respects the natural right to freedom[216]. Associative obligation theories argue in favor of the community commitments. And reasonable consensus theories bring along historical principles of justice that bind together a culture. None of the four types of theories is fully convincing, and there are many discussions between them; but the four taking together make a strong case about the moral duty to obey as a fundamental element for social order to be established.

It is only in recent Western societies, with the triumph of individualism, that the exercise of the individual freedom to decide politically becomes a "human right" - that guarantees free expression and free individual voting. Individual political freedom becomes the central axis of social harmony. Individualism in the West took many years to develop and still exists, in most Western societies, together with, specific (particular) historical institutions of each society that condition in a defined unique way the exercise of the individual vote[217].

In the West, the political legitimacy of the regime depends (in addition to a specific historical institutional arrangement) on the individual's political freedom to decide democratically. But in primary and traditional societies, as we have discussed, there are other forms of political legitimacy.

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[212] Simmons, A. John, 2001, *Justification and Legitimacy: Essays on Rights and Obligations,* Cambridge: Cambridge University Press.

[213] Rawls, John, 1996, *Political Liberalism,* New York: Columbia University Press.

[214] Dworkin, Ronald, 1986, *Law's Empire,* Cambridge, MA: Harvard University Press.

[215] Raz, Joseph, 1986, *The Morality of Freedom,* Oxford: Oxford University Press.

[216] Locke, John, 1690, *Second Treatise on Civil Government,* C. B MacPherson (ed.), Indianapolis, IN: Hackett, 1990.

[217] The individual vote and democracy as we know it today took many years to be established. As late as 1868, at the request of the bishops of Piedmont who asked whether it was lawful for Catholics to participate in political elections, the Sacred Congregation for the Extraordinary Ecclesiastical Affairs replied with a *non expedit* (which means that it was not convenient). The prohibition of participating in the political life of the country was motivated by the belief that the recognition of the new Italian state threatened the independence of the Pope. It is not until 1919 that Benedict XV definitively and officially abrogated the *non expedit,* already dead in the practice for a long time.

In general, when the individuals participate in the political process voluntarily, and in the terms established by their own conceptual system of reference, the social order is legitimate. Political praxis in legitimate societies counts with the implicit approval of its individual members, who share the conception that the existing social order is adequate.

Thus, a first condition for a political regime to be legitimate is: for the individuals in the society to have belonging and emotional stability. And the second condition is: that the institutional arrangement does not violate the society's conceptual system; that it occurs in synchrony with said conceptual system.

In general, political legitimacy exists when mentalizing is done in favor of the society in question, and individuals develop adequate belonging and emotional stability. Political freedom in the sense of individuals deciding, like in the West, is not necessarily given to all members of a community, and it is not necessarily expressed through the exercise of the individual vote. Political freedom in the sense of deciding may be exercised by every individual (as in the Western society), collectively (as in the primary society), or by a specifically designated small group (traditional societies – example the senate in Rome).

However, those members who are granted political freedom in the sense of deciding, for the political system to be legitimate, must exercise it in sync with the social conceptual system of reference. This is what distinguishes legitimate societies from illegitimate ones. It is what differentiates, for example, Cicero's republican rule buy the senate from Caligula's dictatorial imperial Rome.

In Summary: Political legitimacy exists when the following two conditions are satisfied: 1) The individuals of that society have adequate belonging and emotional stability; 2) individuals participate freely in their political system according to their conceptual system of reference and the social process of mentalizing (or social decision making) is done (even if only by a minority) in the benefit of the society in question.

The legitimacy of liberal democracies is a particular case of political legitimacy as defined above. The new definition proposed has three immediate implications: 1) In societies other than those of the modern-contemporary West, political legitimacy is expressed in distinct ways than the respect for human rights and individual voting; 2) even in the modern-contemporary West itself, the individual's political freedom to decide rests on an institutional arrangement that goes well beyond the respect of human rights and individual voting; and 3) at the global level there is no political legitimacy.

Are Democratic Social Choices Superior?

Several dimensions could be used to evaluate whether democracy is superior or not to alternative political systems. Let us discuss three of them: 1) the production of laws and policies that are beneficial for the community and for minorities; 2) improvement in the characters of the participants; 3) intrinsic (non-instrumentalist) arguments.

1) The production of laws and policies that are beneficial for the community and for minorities

John Stuart Mill[218] argues that the power of voting gives political presence to the interest of minorities and individuals. A similar argument is made by Wright about African Americans in the US[219]. Democracy is argued correlates with strong protection of human rights such as fair trial, freedom of association, freedom of expression, bodily integrity and so forth[220]. Sen has argued that famines are not political acceptable in democracies[221]. It should however be pointed out that the causality in here is critical, in Western societies the middle class in the cities gain political power and this was translated into voting power, and the something happens in the US with the African American community, they gain political power through social conflict, that then translated into voting power that reinforced furthermore their political presence. But given voting rights to a minority that does not have previous political power may only result in the manipulation of their votes as it happens in populist democracies. Democracy is not voting rights but voting rights as a manifestation of a real social power, and for this to happen a proper institutional arrangement must exist to maintain manipulation at its minimum.

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[218] Mill, John Stuart. (1861). 'Utilitarianism'. Fraser's Magazine. London: Dent, 1929: ch. 3.

[219] Wright, Gavin, 2013, *Sharing the Prize: The Economics of the Civil Rights Revolution in the American South*, Cambridge, MA: Harvard University Press.

[220] Gaus 1996. Ch.13; Christiano 2011; Gaus 2011: ch 22. Gaus, Gerald F., 1996, *Justificatory Liberalism: An Essay on Epistemology and Political Theory,* New York: Oxford University Press. Christiano, Thomas, 2011, "An Instrumental Argument for a Human Right to Democracy: An Instrumental Argument for a Human Right to Democracy", *Philosophy & Public Affairs,* 39(2): 142–176. doi:10.1111/j.1088-4963.2011.01204. x. Gaus, Gerald F., 2011, *The Order of Public Reason: A Theory of Freedom and Morality in a Diverse and Bounded World,* Cambridge: Cambridge University Press. doi:10.1017/CBO9780511780844

[221] Sen, Amartya, 1999, *Development as Freedom,* New York: Knopf. pp. 152.

Acemoglu[222] and other economists had argued that democracy promotes economic growth. This argument however is only partially correct. In the long run, in the history of capitalism, democracy has been associated with fast economic growth because it is the dynamic changing preferences of the middle class what explains the fast economic growth of the Western societies. And even the successful Asian countries have been led in their growth by their exports to the global middle class. Thus, the Asian growth model depends for its success upon the existence of a successful Western growth model. However, in the short term in cross sectional country comparisons democracy cannot be associated with fast economic growth. Most of the Asian successful countries started, or are even now, authoritarian states. Authoritarian China's fast economic growth versus Mexico's electoral democracy very slow economic growth leaves no doubt that democracy does not necessarily promotes economic growth, and that fast economic growth can be obtained without democracy.

Democracy has been justified in epistemic terms, however most of these justifications are not particularly strong. The first famous epistemic attempt was the Condorcet jury theorem which argues that more judges increase the probability of a right judgment, but only works if we assume that the probability of each judge to be right is greater than 50% and that their judgments are independent. Assumptions that rarely have empirical relevance[223]. A second epistemic attempt argues that democracy exploit the cognitive diversity of large group of citizens and therefore have access to very diverse information and knowledge, and therefore democracy can produce better decisions than rule by experts[224]. It is also however

[222] Acemoglu et al. 2019Acemoglu, Daron, Suresh Naidu, Pascual Restrepo, and James A. Robinson, 2019, "Democracy Does Cause Growth", *Journal of Political Economy,* 127(1): 47–100. doi:10.1086/700936.

[223] Black 1963: 159.65; Ladha 1992; Estlund 1997; 2008: ch XII, Anderson 2006. Black, Duncan, 1963, *The Theory of Committees and Elections,* second edition, Cambridge: Cambridge University Press. Ladha, Krishna K., 1992, "The Condorcet Jury Theorem, Free Speech, and Correlated Votes", *American Journal of Political Science,* 36(3): 617–634. doi:10.2307/2111584. Estlund, David, 1997, "The Epistemic Dimension of Democratic Authority": *The Modern Schoolman,* 74(4): 259–276. doi:10.5840/schoolman199774424. Anderson, Elizabeth, 2006, "The Epistemology of Democracy", *Episteme,* 3(1–2): 8–22. doi:10.3366/epi.2006.3.1-2.8.

[224] Landermore 2013; Hong and Page 2004; Page 2007. Landemore, Hélène, 2013, *Democratic Reason: Politics, Collective Intelligence, and the Rule of the Many,* Princeton: Princeton University Press. Hong, Lu and Scott E. Page, 2004, "Groups of Diverse Problem Solvers Can Outperform Groups of High-Ability Problem Solvers", *Proceedings of the National Academy of Sciences,* 101(46): 16385–16389. doi:10.1073/pnas.0403723101. Page, Scott E., 2007, *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies,* Princeton: Princeton University Press.

being disputed[225]. If any of these two epistemic justifications, previously discussed, were correct, China would not have been more successful, as it was, than all the democratic underdeveloped countries.

There is however a third epistemic justification that deserves attention, Dewey has argued that democracy is more informed about the interests of citizens, experts need inputs from the masses to correct their biases and to tell them where the problems lie[226]. Democracy is in fact the required mechanism of social participation once the individuals have been socially differentiated by their rights. However, there are critical decisions to be made as to which decisions should be taken by institutional officials that are elected (the president, congress), which others by non-elected officials which should be deisgnated by elected officials under expert advice (such as the central bank head, or the national health higher ranked officers) and which others should be taken by participatory democracy (whether to build a road or a damn for a small community). In any decision public opinion is relevant and elected officials should conduct frequent surveys to maintain themselves informed of the masses' opinions, but participatory democracy (direct popular voting to define the decision to take) must be limited to a restricted number of cases. Moreover, all the decision should be transparent and discussed in the free press and the web, and a strict balance or powers and cross institutional surveillance must be adopted. Thus, although Dewey in principle is correct, how to pass the information from the citizens to the institutional officials (who should be guided by experts) involves a sophisticated institutional arrangement that must be carefully designed.

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[225] Quirk 2014; Brenmam 2014; Thompson 2014; Bajaj 2014. Quirk, Paul J., 2014, "Making It up on Volume: Are Larger Groups Really Smarter?", *Critical Review,* 26(1–2): 129–150. doi:10.1080/08913811.2014.907046. Brennan, Jason, 2014, "How Smart Is Democracy? You Can't Answer That Question a Priori", *Critical Review,* 26(1–2): 33–58. doi:10.1080/08913811.2014.907040. Thompson, Abigail, 2014, "Does Diversity Trump Ability?" *Notices of the AMS,* 61(9): 1024–1030. [Thompson 2014 available online]. Bajaj, Sameer, 2014, "Review of *Democratic Reason: Politics, Collective Intelligence, and the Rule of the Many,* by Hélène Landemore", *Ethics,* 124(2): 426–431. doi:10.1086/673507.

[226] Dewey 1927 (2012: 154-155); Anderson 2006; Knight and Johnson 2011. Dewey, John, 1927 [2012], *The Public and Its Problems: An Essay in Political Inquiry,* New York: Henry Holt; reprinted, Melvin L. Rogers (ed.), University Park, PA: Pennsylvania State University, 2012. Anderson, Elizabeth, 2006, "The Epistemology of Democracy", *Episteme,* 3(1–2): 8–22. doi:10.3366/epi.2006.3.1-2.8. Knight, Jack, and James Johnson, 2011, *The Priority of Democracy: Political Consequences of Pragmatism,* Princeton: Princeton University Press.

Some authors have argued that democracy is inferior to other political regimes. Plato argued that it undermines the required expertise for the proper governance of the society[227]. Plato argued that philosophers-kings should be the rulers, on the line of what Estlund has called a "epistocracy" – a form of oligarchy that involves rule by experts[228]. Range voting (overweighting the votes of a group of voters as in the US, see table 5.3) is one form of epistocracy which was defended by Mill[229]. Plato's argument cannot be disregard as irrelevant. In fact, liberal democracies, as we have argued, depend upon a sophisticated institutional arrangement that considers experts' opinions, and without such institutional arrangement, it cannot be shown that just by simple aggregating votes democracies will arrive to good social policies.

Hobbes and several contemporary authors argue that democracy is inferior because fosters destabilizing dissension. Politician search for votes and the lack of understanding and interest of the voters in political issues may produce public policies that are not beneficial for the common good[230]. The answer again is the institutional arrangement: The proper intuitions to create public awareness and guide an open political discussion[231]; political competition, balance of powers and other institutions to force politicians to be responsible; and adequate discrimination between the procedures to arrive at social choices, reducing participatory democracy to restricted cases, and defining specifically how diverse institutions of representative democracy participate in each social choice, counterbal-

[227] Plato, *The Republic,* revised/trans. by Lee, D., Harmondsworth: Penguin Books, 1974, 2nd edition. Book VI.

[228] Estlund, David, 2003, "Why Not Epistocracy", in *Desire, Identity, and Existence: Essays in Honor of T.M. Penner,* Naomi Reshotko (ed.), Kelowna, BC: Academic Printing and Publishing, 53–69.

[229] Mill 1861., op. cit.: ch.4.

[230] Hobbes 1651: ch. XIX; Lord, Ross and Lepper 1979; Bartels 2002; Kahan 2013; Achen and Bartels 2016. Hobbes, Thomas, 1651, *Leviathan,* London; reprinted, C.B. MacPherson (ed.), Harmondsworth: Penguin Books, 1968. Lord, Charles G., Lee Ross, and Mark R. Lepper, 1979, "Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence.", *Journal of Personality and Social Psychology,* 37(11): 2098–2109. doi:10.1037/0022-3514.37.11.2098. Bartels, Larry M., 2002, "Beyond the Running Tally: Partisan Bias in Political Perceptions", *Political Behavior,* 24(2): 117–150. doi:10.1023/A:1021226224601. Kahan, Dan M., 2013, "Ideology, Motivated Reasoning, and Cognitive Reflection", *Judgment and Decision Making,* 8(4): 407–424

[231] Caplan 2007; Somin 2013; Brennan 2016. Caplan, Bryan, 2007, *The Myth of the Rational Voter: Why Democracies Choose Bad Policies,* Princeton: Princeton University Press. Somin, Ilya, 2016, *Against Democracy,* Princeton: Princeton University Press.

ancing each other, privileging continuity, and taking into account both public opinion and experts' advice.

2) Improvement in the characters of the participants.

Several authors argue argued that democracy encourage people to be autonomous, rational, active, and moral[232]; and therefore, that they are more likely to produce good legislation than other political regimes. This line of argument again is questionable in empirical grounds given the success of China, at least in economic growth.

3) intrinsic (non-instrumentalist) arguments

Three intrinsic arguments have been offered in favor of democracy: liberty, equality, and democracy as public justification. Liberty implies that individuals are only free in democracy where they enjoy the freedom of self and collective self-determination[233]. Self-determination is a feature recognized in the traditional societies, it is the reason to encourage social responsibility and the basis to blame sinful behavior in religious societies. Therefore, self-determination is not unique to democratic societies. Moreover, collective self-determination may ocurr also in other political regimes[234].

Equality means that everybody is given the same vote, but it is not enough. Equality may lead to the tyranny of the majority. To avoid it minorities should not be treated as equals, because they have specific needs that must be satisfied. Thus, Human rights present a clear limit to majority rule democracy. Egalitarianism again is not a unique feature of democratic societies. Christianity, for example, sees the children of God as equal. Marxism argues that everybody is equal in the ownership of the means of production. There are many diverse conceptions of equality of which democratic egalitarianism is only one, and in fact democratic egalitarianism may be associated with many other social inequalities.

Public justification means that for the democratic system to be legitimate social choices must result from a free and inclusive democratic process of opinion and will formation. A democratic legitimate process must

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[232] Mill 1861 (1991:74)., op. cit; Elster 1986 (2003: 152); Hannon 2020. Elster, Jon, 1986 [2003], "The Market and the Forum: Three Varieties of Political Theory", in *Foundations of Scoial Choice Theory,* Jon Elster and Aanund Hyllund (eds.), Cambridge: Cambridge University Press, 103–132; reprinted in Christiano 2003: 138–158. Hannon, Michael, 2020, "Empathetic Understanding and Deliberative Democracy", *Philosophy and Phenomenological Research,* 101(3): 591–611. doi:10.1111/phpr.12624.

[233] Gould, Carol C., 1988, *Rethinking Democracy: Freedom and Social Cooperation in Politics, Economics and Society,* New York: Cambridge University Press, pp. 48-85.

[234] Wolff, Robert Paul, 1970, *In Defense of Anarchism,* New York, NY: Harper and Row. Ch 2.

include the relationship between institutionalized deliberative bodies process, such as legislatures, courts and agencies, and informal communication in the public sphere which is wild and not centrally coordinated[235]. However, nothing guarantees that deep disagreements will not remain, thus both Habermas' deliberative democracy and Cohen's notion of mutually acceptable reasons have been criticized on the grounds of being too idealistic[236]. Moreover, it has been pointed out that if deliberative democracy is not ethically rooted it may not yield robust moral prescriptions[237]. The problem is that even the existence of partial consensus is questionable as a guide to public policy because nothing guarantees that they are a better choice for the well-being of the community[238]. Democratic majority choices (respecting human and minority rights) may be better along many parameters for the well-being of the community than democratic choices based in minimal consensual agreements.

In general, the problems with the intrinsic arguments as to why democracy is superior to other political regimes is that they lack scientific support. Democratic liberty and democratic equality are historical characteristics of the Western societies that have their own ethical justifications. And based on Western's ethical considerations they are superior. But, from the point of view of other ethics distinct from the Western they are not superior.

Since there are not universal values, there is not any scale to argue that democracy is superior to other regimes in arriving to proper social choices. Measure by the Western's values democracy is superior, measure by other traditional societies' values it is not. The discussion as to whether democracy is superior or not to other political regimes becomes then an ethical question.

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[235] Habermas, Jürgen, 1992 [1996], *Faktizität und Geltung. Beiträge zur Diksurstheorie des Rechts und des demokratischen Rechtsstaats,* Frankfurt am Main: Suhrkamp Verlag. Translated as *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy,* William Rehg (trans.), Cambridge, MA: MIT Press, 1996. Pp. 110.

[236] Estlund, David, 2008, *Democratic Authority: A Philosophical Framework,* Princeton: Princeton University Press. Ch. 10.

[237] Forst, Rainer, 2016, "The Justification of Basic Rights: A Discourse-Theoretical Approach", *Netherlands Journal of Legal Philosophy,* 45(3): 7–28. doi:10.5553/NJLP/221307132016045003002

[238] Christiano, Thomas, 2009, "Must Democracy Be Reasonable?", *Canadian Journal of Philosophy,* 39(1): 1–34. doi:10.1353/cjp.0.0037.

CONCLUSION

The following conclusions can be obtained from this chapter. 1) There is not theoretical way to be able to aggregate individual votes. 2) Any aggregation depends upon a given institutional arrangement. 3) Institutions however cannot replace electoral process or other ways to collect public opinion. 4) In a society that has diversified historically the individuals based on their rights, as the Western societies, the best-known way for adequate social choices is the liberal democratic process. 5) However, in traditional societies, which have not historically diversified the individuals based on their rights, it cannot be shown that the liberal democratic process is superior to other traditional ways to define social choices. 6) A liberal democracy is not defined only by the rights to vote and freely express opinions. Any democratic process can be manipulated and can collapsed into an illegitimate authoritarian or illegitimate authoritarian populist society. What prevents such collapse is a complex institutional arrangement. 7) Democracy requires a sophisticated institutional arrangement that must guarantee that adequate social choices that increases the well-being of the community, and the minorities within it, while respecting individual human rights, is obtained. This complex democratic institutional arrangement must be able to resolve the issue of how democratic participation should happen, so that there is collective participation, the experts are heard, and the representants take proper social choices. 8) The institutional arrangement in a liberal democracy, precludes the leaders from abusing of their power through a delicate institutional balance that nor only includes political competition and strong judicial and legislative branches of power, but also many other social government and non-government institutions like: independent central banks; autonomous government institutions; independent prosecutors; institutions managed by officials with a long civil service carrier, like for example the FBI; the free press; the army; the church; prestigious institutions from the civil society – such as the NBER (the National Bureau of Economic Research); universities and experts' institutes; and many others. 9) In general, a political regime is legitimate if the following two conditions are satisfied: I) The individuals of that society have adequate belonging and emotional stability; II) individuals participate freely in their political system according to their conceptual system of reference and the process of mentalizing (or decision making) is done (even if only by a minority) in the benefit of the society in question. A legitimate democratic regime is a particular case

of the previous definition.10) The issues of social participation are very delicate. In many topics the experts' opinion must be heard. The division of labor implies that a group of representants specialize in competing in politics – such competition to be fair requires proper institutions. Moreover, people must be informed as to the importance of their participation and stimulated to deliberate and that also requires institutions. 11) Democratic choices must include interest and values. Deliberation about values is required-although agreements may not necessarily be reached, and recognition of divergent values and interests must be recognized. A sophisticated democratic institutional arrangement must produce balance social choices. 12) The proper institutions must create public awareness and guide an open political discussion[239]; promote political competition, balance of powers and other institutions to force politicians to be responsible; and discriminate between the procedures to arrive at social choices, reducing participatory democracy to restricted cases, and defining specifically how diverse institutions of representative democracy participate in each social choice, counterbalancing each other, privileging continuity, and taking into account public opinion and experts' advice. 13) Deliberative democracy is relevant for discussion in small groups and may be an important factor in creating public awareness in large groups. But it has critical limitations that must be understood. First, nothing guarantees that common agreements, whether general or partial, will be obtained. Second, even if partial agreements are obtained, partial consensus is questionable as a guide to public policy because nothing guarantees that they are a better choice for the well-being of the community[240]. Democratic majority choices (respecting human and minority rights) may be better along many parameters for the well-being of the community than democratic choices based in minimal consensual agreements. 14) Critical value and interest disagreements remain always alive in societies and must be solved in the integrative system by enveloped institutional arrangements and their corresponding conceptual systems that establish the behavior accepted by law or by customs. 15) When an integrative system solution is not found, open conflict occurs, and the power system enters its solution. 16) SCT, as it exists today, only explores social choices as they relate to aggregating individuals' preferences + values, and consequently it has several limitations. Among these limitations are A) underestimates the role of power and conflict in social choices (a topic for next chapter),

[239] Caplan 2007., op. cit; Somin 2013., op. cit.; Brennan 2016., op. cit.

[240] Christiano 2009., op. cit.

B) it does not analyze properly the social choices in traditional societies, C) it does not explore sufficiently the requirements that the institutional arrangement of a democratic liberal democracy must have. Therefore, there is not a proper analysis of the relationship between deliberative democracy, participatory democracy, representative democracy, and the role of experts. 17) SCT is not adequate to understand the requirements of social choices at the World's level. The world, seen as a whole, is a non-democratic society, therefore socio-political choices are not taken by aggregating individuals' preferences + values, nor they could be taken that way because there are not mechanisms to do so. For social choices related to the world, seen as one culture, individual democratic participation is out of the question. However, the ICTR is bringing the world closer together, and a critical issue is how to prevent national leaders to take choices only based in selfish short term zero sum based national interests. The answer lies in a stronger international institutional arrangement and an increasing participation of the international civil society. In other works, I have explored how a stronger international institutional arrangement may be key to solve global problems such as: underdevelopment, poverty, financial international stability, global health, the global climate, global crime, and others[241]. 18) Many of the critical social choices taken recently and that need to be taken in the future are taken by leaders, and the role of these leaders and of experts advising them must be better understood. Example: The critical social choice in terms of reducing global poverty was the Chinese decision to incorporate China economically to the capitalistic countries' trade. And it was taking by Chinese leaders. 19) SCT leaves out critical social choices as those related to economic growth, the efficiency of the economic markets, the role of social conflict in social choice, and the role of the civil society. An extended CI's SCT is needed to further explore these issues.

[241] And they are highly misleading and dangerous.

CHAPTER SIX: SOCIAL CHOICES, SOCIAL CONFLICT AND SOCIAL CHANGE

As we have seen deliberation + information + free voting aggregation (including preferences and values) does not produce an acceptable democratic solution. Nothing guarantees that a common ground will be obtained, nor even a partial common ground. In real democracies there are standing disagreements both in interest and values that cannot be resolved by deliberation + information. Deliberation + information does not guarantee neither respect for minorities, not for human rights. A liberal democracy to get to social choices that improve the well-being of the community, and of the minorities within it, respecting human rights, requires, as we concluded in the last chapter, a sophisticated institutional arrangement.

However, even a liberal democracy with a sophisticated institutional arrangement is not guaranteed that social disagreements and conflicts will be resolved democratically within the integrative system, there are instances in which the conflict ends to be resolved through the power system using social force. And even in the cases when social conflict is finally democratically resolved, its role in the society must be understood. Public manifestations and civil right movements have an important role to play that goes beyond the democratic procedure. Societies are not standing systems composed by individuals with given preferences +values confronting a given set of social alternatives. They are composed by institutional arrangement and its corresponding conceptual system that reflect the history of the culture in question, by social groups, and by individuals. And all the elements in the society are within a permanent flux, a continuous changing process, which however happens within certain social order, because social order is an evolutionary survival requirement.

Social change is consequence of external challenges, technological innovations in the productive process, and social innovations, rooted in historical institutions and their corresponding conceptual systems. And the process of social change involves social conflict between groups and individuals whose interests and values are also changing. Already built-in social conflicts, technological innovations, and historical institutions and values, largely define the

range of possible social choices that can be taken in any of the three social systems, the economic, the integrative, and the power. Democratic social choices are only one of the components of the process of social change. Democratic social choices happen within the integrative system, and therefore they are critical to maintain social order; but they ocurr within a process of social change largely defined by other forces, among which social conflict is critical.

Social change requires social conflict, and therefore a critical element of social choices is social conflict. Think as examples Cromwell's lead civil war in England, the US independence, the French revolution, the social movements that ended with the African Americans liberation and posterior rights to Vote. Manifestations and civil right movements are independent forms to channel social conflict that have a parallel route to the democratic life of the society, and which are critical to maintain a healthy social change. The democratic life of the society runs parallel to social conflict, which occurs in many social levels; and the quality of a democracy, to a large extent, depends upon its flexibility to integrate social conflict into social changes that will be beneficial to the establishment of a new more sophisticated social order.

This chapter has two purposes. The first purpose is to show that present political choices are marginal in the context of the overall process of social change largely determined by external events, technological development, and historical institutions (including traditional social conflicts). Therefore, it is critical that political choices are taken understanding the complexity of the whole environment in which they ocurr. Therefore, they need to be taken by political representants with the advice of experts. This is particularly important to be understood because it warns us that participatory democracy based upon deliberation of an informed public is not the correct way to take most critical political choices. Public participation is fundamental, but it must take one of the following routes: manifestations, civil society institutions, public opinion surveys, direct voting to choose political representants, and only for small communities and for very define projects direct participatory informative-deliberative democracy.

The second purpose is to present how social conflict happens in many instances in the social system; and to show that if badly managed it can produce social disintegration, power confrontations and enormous social destruction. Any socio-political choice must be careful taken not to destroy the traditions in the society that maintain social order. However, social conflict is required for the society to have proper social change, therefore all the traditional systems have built in tolerance and acceptance of social conflict. Social conflict expressed in public opinion, social

manifestations, and so on, have always existed in traditional societies. In fact, whenever a social system closes itself and forbids social conflict, it loses adaptability, and finally collapses into chaos. Both social order and social change are required for evolutionary survival.

In the first section we discuss the evolutionary roots of social order, social conflict, and social change to be able to establish: 1) Why any new socio-political decision must be taken in the context of the historical context of the enveloped institutional arrangement and the corresponding conceptual system of each culture; and 2) why all the large societies must have built in mechanisms to allow for social conflict, which is an important mechanism to foster social change .

In the second section we present democratic political choices in the context of evolutionary social order and social change; and we reiterate why participatory informative-deliberative democracy must be constraint to small communities and clearly defined social alternatives. The role of representative democracy and of the advice of experts in large societies is fundamental. However, in societies that have differentiated the individuals based on their individual rights, it is needed to create as much channels of information between the public and the political representants as possible, thus organized political deliberation in small groups should be encouraged, free press and free web are a requirement, frequent opinion surveys are a must, guaranteed valid counting of individual votes is critical, and traditional methods like public manifestations and other forms to express social discontent must be allowed. In an individualistic society, like the Western ones, social change happens very fast, and that implies the need of flexible institutions, capable to transform social conflict into a social change oriented towards a new social order. That requires a very complex institutional arrangement, of which participatory informative-deliberative democracy is only a small part.

THE EVOLUTIONARY ROOTS OF SOCIAL ORDER, SOCIAL CONFLICT AND SOCIAL CHANGE

Social Order

Social order is a natural consequence of the need of humans to live in group. Our evolutionary ancestor, whoever it was, already lived with so-

cial order. In a world with existential regularities, it was natural that the primary societies tied social order to their relationship with the biological and physical universe and that they valued the stability and maintenance of social order [242]. In enlarged traditional societies, already compose of distinct groups, and in which individuals do not have physical contact anymore, social order cannot longer be sustained only by evolutionary emotional belonging and the question of How to establish social order? Became critical.

The belonging instinct is evolutionarily designed to tie together small groups, but it is insufficient to maintain together large human societies. In small groups the individuals see each other, and they develop interpersonal relations and feelings. This direct interaction generates not only a social bond, but also a chemical one through oxytocin and dopamine secretion. Therefore, in small groups the conceptual system has a high emotional component. In large groups many individuals never get to know each other. Large groups are composed by distinct small groups with different conceptual systems. Therefore, large groups need an envelope conceptual system of values that hold the society together by integrating the distinct conceptual systems of the diverse small groups. The role of such enveloped conceptual system is to tie, through networks, the diverse small groups and/or the individuals that constitute the society. This way chemical bonding continues happening in small groups, such as the extended family in traditional societies or the unicellular family in contemporary Western societies; but there is also a large enveloped conceptual bonding that creates belonging in the large group. Between societies that do not share a common conceptual system, there is no belonging at all, and aggression is what dominates the interaction between them.

In general, whether there is harmony or social conflict depends upon the well/bad belonging within the groups, and the well/bad functioning of the network established by the enveloped conceptual system and its corresponding institutional arrangement. But what is critical to observe is that because evolutionary reasons there will always be conflict within the groups that constitute the society, a conflict manage through the enveloped conceptual belonging, but which never goes away. Belonging is needed for social order. Social conflict to foster social change. Both social order and social change are evolutionary survival requirements.

Democratic choices are integrative system choices, they foster social order. However, the society needs to allow for dissent and conflict be-

[242] Lévi-strauss, claude (1964), *The Savage Mind,* Mexico, Fondo de cultura Economica, breviarios.

cause social change is required. Thus, in parallel to the democratic solutions, minorities dissent must be allowed. The lesson to be learnt here is that the quality of the political life of a society strictly depends in three factors: 1) the political life of the small groups that constitute the large society, 2) the quality of the envelope institutional arrangement and conceptual system that ties small groups together and, 3) the open expression of the social conflict between the small groups that constitute the society, which is the necessary guidance for the social changes that may be conducive for the new social order required.

In the old Rome, for example, as in many other traditional societies, social order was initially based on a council of leaders representing the diverse clans or regions. Later, it changes to a more sophisticated traditional system, based on direct democracy for certain public posts, the senate elected by the elites, and the emperor. Social order in Rome was always difficult and fragile, and in many cases had to be imposed by force. Remember, for example, Cicero confrontation with Cesar. In contemporary societies, as in the traditional ones, social order depends critically in the social order of the groups that compose the larger society. And by its very nature it is also fragile, think for example in the breakdown of both the former USSR and the former Yugoslav, in The American Civil War, The French Revolution, The Russian Revolution, or The Mexican Revolution.

In addition to the fragility of the social order in the larger societies, there is of course a very fragile global social system, always characterized by wars and confrontations – social order at the global level has never been fully obtained.

A critical issue in any society, whether democratic or not, is how to be able to maintain social order; but this implies managing social conflict and social change to establish a new social order. Any social order, including a democratic one, that cannot manage conflict and change collapses into chaos.

Economic Theories of Social Change

There are many economic theories of social change. We shall mention four of them: The classics Stationary State, Marx's, Veblen's, and North's. The critical issue to observe in them is that social change always brings along social conflict.

For Marx the economic system explained social and institutional change. For him the changes in the relationship of humans with the material universe define the changes in the social universe. For him history is a teleological process which at the end will bring about the humanitarian communist society, in which the human needs of the individual will be satisfied. Social conflict in Marx is between capitalists and proletarians and will necessarily end in the communist humane society.

Veblen agreed with Marx in many ways, but he points out that the social institutions created by the previous technological process will enter in conflict with the new institutions, consequence of the new – most recent – technological process. And he argues that the result of this conflict varies from society to society, and it is distinct in diverse historical times. Therefore, it is not, as in Marx a teleological process. According to him we can study the historical past, and he did, but we cannot forecast the future. Social conflict in Veblen is between the leisure social class representing ways of living and thinking of the old technology and the industrial social class representing the ways of living and thinking of the new technology.

In North, social change happens anywhere in society. For him individual creativity nor only changes the technological process of production, but also the social process by which individuals interact. There is a permanent questioning and redefining of the conceptual system and its corresponding institutional arrangement, which in turn modifies the three belonging relationships. And since it modifies social significance, it also changes the three social systems of interaction. For him change can start at any social instance. For example, individual creativity may modify the integrative system, which then will have repercussions in the other two systems of social interaction, and then, the three social systems will modify the conceptual system and its corresponding institutional arrangement. North's unique contribution is to point out that: social creativity occurs at any social instance. North, however, warn us, as Veblen did, that old institutions are resilient and difficult to change. This is how he explains why exporting Western institutions to developing countries has been so difficult and unsuccessful. In North, social conflict occurs, in underdeveloped countries, between the social classes representing the old institutions that restrict human individual creativity and the social classes representing the new institutions imported from the Western culture. He point out that: usually the social classes representing the old institutions prevail. In developed countries there is not social conflict in North's view.

Finally, the classical economics Stationary State argued that as the population grows less productive land is used, therefore the cost of producing food goes up, the salaries go up, rent of the land goes up (because it's defined by the less productive land), and profits go to zero. Different economists design distinct ways to escape the Stationary State fatality. Malthus recommended policies to maintain population growth under control (which are still critical for many developing economies), Ricardo recommended importing food (which is also still useful for developing economies). But the true way out of the Stationary State is technological development. Technology in food production and in other goods increases productivity and allow for both salaries and profits to go up. That is why technology was for Smith so crucial. And What does technology depend on? Mainly on mass production allowed by the enlargement of the markets. The positive cycle of economic development implied in the West was as follows: 1) International trade increased due to both gold from the Americas and species from the east. International trade meant already access to cheaper imported food. 2) Countries that were not involved neither in gold nor in species had to developed mass production. 3) Consequently, the burgos-cities grew. And this, by the way, was the best possible policy to reduce population growth, because having children in cities became more expensive and difficult. 4) As cities grew, the middle class consolidated itself and democracy came along. Moreover, the consumption of the middle class provided a new substantial and decisive enlargement of the markets, which fostered technological development both in food production as well as in other goods. Smith's main contribution is to have understood the relationship between large markets, technological development, and capitalist economic growth. The social conflict in the classical economist stationary state is between the social class of the landlords and the social class of the capitalists. Landlords benefit from the increasing rent due to the lower productivity of the marginal lands; and they defend national protectionism. While the capitalists searching for the profits due to the expansion of the markets, defend free trade.

The three critical points to understand about social change are. 1) That although it occurs as North argues at any place in the social system, its main determinant is technological development; 2) that by its very nature social change is slow, particularly due to the opposition of the old institutions; and 3) that social change always involves social conflict. Once we understand that institutions are not only physical arrangements

of actual physical institutions, but also the conceptual systems that they represent, we can see why social change is usually so much opposed. Values and concepts remain attach to societies in occasions for centuries. The Western capitalism and the Asian capitalism had been exceptions, and even in them social change in certain areas is still slow. In some other regions like the Arab countries, South Asia, and large parts of Africa and India, the conceptual systems have prevailed, and social change has been very slow.

Social change is the consequence of changing external conditions, old institutions, technological development and individual or group creativity all through the social system. A key ingredient in social change is social conflict. Democracy and individual voting are only a marginal (although relevant) component in all this process.

Social Conflict

Social conflict happens in large societies along many dimensions. In the economic system as we have seen there are conflicts between social classes. The classical economists social class conflict between rentiers and capitalist is still in the contemporary world a key element of conflict. The ICTR is integrating the world, and while the frontier entrepreneurs are pushing politically for free trade (looking to increase, in fragments of production, their manufacturing productivity through incorporating low salaries countries), the rentiers (in these case high salary unproductive workers- which enjoy a rent just because being citizens of the US or other developed Western country; and unproductive entrepreneurs with old fashioned production processes that will enjoy a rent due to protectionist measures) are pushing politically towards protectionism.

We can also see Veblen's social classes conflict operating today. The new ways of living and thinking represented by the ICTR confronting the old nationalistic ways of living and thinking of the old technologies. North's social classes conflict is today operating in many developed countries, in which there are always tendencies for nationalistic policies (examples are the communist model, the import substitution model and so forth). Marx social class conflict is today operating in an indirect-cum-bersome way (never predicted by Marx); with high salary workers in developed nations (that have become rentiers due to their nationality)

opposing migration and free trade, and accusing the capitalist frontier entrepreneurs, of their own countries, of damaging their interests.

But besides social classes conflict because of economic causes, there are in societies social conflicts for many other reasons. Social conflict may be due to personal, economic, political, ideological, religious, racial, sexual, conceptual, or power-strategic differences. It happens at the individual level, between groups within a society, or between societies. There is always a difference between in-group and out-group members that creates conflict. Conflict is a natural characteristic of human evolution and may have the positive influence to promote social change. Conflict resolution, however, not always ends in a positive note; it has the potential to go wrong and be highly destructive. Positive conflict resolution involves belonging. Social conflict resolution involves love and social significance. However, both love and social significance are prone to belonging failures; because the individual is always distinct from the social group, and because diverse groups interact towards one another within a frame of the in-group versus out-group antagonism. In large societies the envelope conceptual system and institutional arrangement is abstract and fragile.

A Simplified General Framework of Analyzing Conflict

Conflict in human societies is evolutionary built-in for four reasons: 1) The need of individuality of the genetic pool, to maximize life survival chances; 2) the competition for scarce resources; 3) that we were evolutionarily designed to belong to small groups; and 4) the representational nature of reality in the human mind.

The individual is born as a social being which is linked to the society through a conceptual system and its corresponding institutional arrangement which is particular to a social group or society. The conceptual system defines conflict resolution through the three ways of belonging: love, social significance, and existential significance. Social significance defines the three social systems: the integrative, the economic and the power one.

Belonging failures occur in any of the three belonging ways. Love belonging failures create insecure personalities and all sort of psychological and sociological pathologies. Social belonging failures may be rooted in any one of the three social systems. Economic conflicts are due to scarce resources and to changing economic interests due

to technological innovations, and they can only be partially solved in the economic system, the integrative and/or power systems are always required. Integrative system conflicts are due to the representational reality of the human mind, and they are political, ideological, religious, ethical, legal, racial, sexual, and so on. Power conflicts may be consequence of preventing deviant behavior within an in-group or society, or of confronting out-groups or other societies. Power conflicts cannot last forever, and some sort of integrative and economic solution is required, even if it is in the form of limited peace agreements. Therefore, power confrontations and diplomacy frequently go together. Existential belonging failures may generate individual anxiety, and in addition may create unsustainable relations of humans with the rest of the universe – as the global climate crisis has shown.

Social conflict increases as the societies get larger and encompass more diverse social groups with distinct interests and conceptual systems. The envelope conceptual systems become more fragile. Social conflict also increases as the global population gets larger, and competition among different societies for scarce resources becomes more frequent. Figures 6.1 and 6.2 summarize the general framework of conflict analysis and key definitions for the benefit of the reader.

FIGURE 6.1 REASONS FOR EVOLUTIONARY CONFLICT

1) The need of individuality of the genetic pool to maximize life survival chances; 2) the competition for scarce resources; 3) that we were evolutionarily designed to belong to small groups; and 4) the representational nature of reality in the human mind.

FIGURE 6.2 SOURCES OF SOCIAL CONFLICT

Love Failures: psychological conflict

Social Significance Failures:

Scarce resources and technological innovations – economic conflict

Representational reality – integrative system conflicts: Political, ideological, religious, ethical, legal, racial, sexual, and so on.

In-group versus out-group – power system conflicts: violence, social protest, social warfare, wars, diplomacy

Existential Failures: Individual anxiety and psychological problems, global climate crisis

Political Choices and Social Conflict

As we have seen social conflict occurs all along the social system, and therefore it is not possible to manage it only by political choices. Social conflict is managed in societies by a very complex historically built institutional arrangement and a conceptual system that goes well beyond the today's political life of the community. Traditional societies, long before the beginning of democracies, already had mechanisms to manage social conflict. To start with, there is a socialization of the children that guides them to channel their natural born aggression towards an acceptable social behavior. This socialization process is taught by the mother, and already starts even before the child learns a language, but it certainly accelerates with the learning of language. This socialization process implies the teaching of what is an ethical behavior within the given culture of reference. Moreover, as the children grow, they are taught a trade that integrates them into the economic system; and in traditional societies, also to the integrative system, because the trade is associated with a given social position and status. Children are also taught a religion and a whole conceptual system that define their representational reality and their social and existential significance. It is from this traditional belonging that large cultures were developed, as the consequence of power confrontation between small groups. In such large groups there was always an envelope institutional arrangement and a conceptual system that define the live of the new enlarged community, while accepting the dissent and conflict between the smaller groups that constituted the enlarge society. What need to be emphasized is that the "traditions" are what maintains social conflict under control in a traditional society, and what guides it towards a social change that allows for a new social order. And these "traditions" were not, and are not even today, defined only by the political system, and much less by today's political choices. Today's political choices are marginal to the whole process of social order- social conflict-social change-reestablishment of social order-social conflict and so on. The point is that today's political choices to be valid must be rooted in the historical "traditions" that define an orderly social life. Choices taken by representative officials, with the advice of experts, must be aware of these "traditions"; which can be slowly modified, but has to be done by a conservative process, that while fostering social change avoids social chaos.

DEMOCRATIC CHOICES, SOCIAL CONFLICT AND SOCIAL ORDER

In Western democracies social change, as compared with traditional societies, happens very fast for several reasons: 1) technologies change more rapidly; 2) the ICTR is bringing the world closer together, so external factors put more pressure for social change; 3) social participation is more intense. While the rapid social change is good news, it brings along the possibility of increasing social conflict that must be well managed to maintain a changing but stable social order. At the level of each democratic Western country is crucial to maintain a strong but flexible institutional arrangement capable to cope with the increasing social conflict. At the level of developing countries democracy either does not exist or is still an incipient phenomenon; therefore, rapid social changes pose a threat, and leaders of these nations must be particularly concern with the implications of the fast social changes. At the global level, the weakness of the international institutional arrangement is a serious concern.

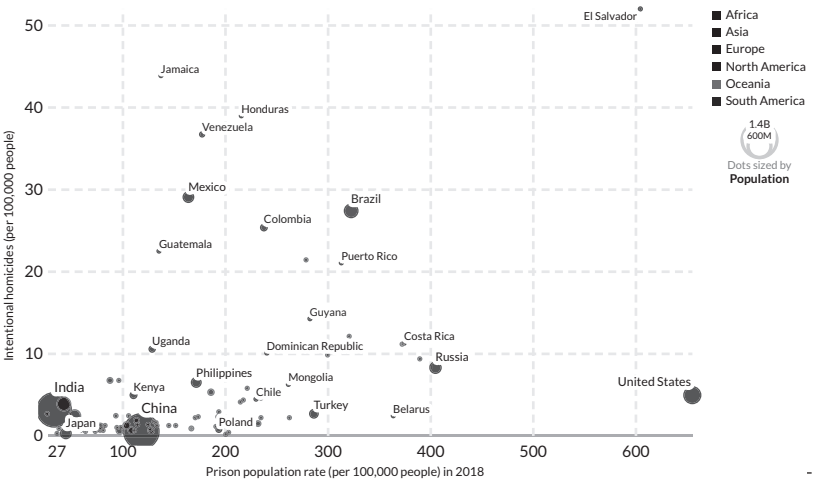
How well do democracies manage social conflict? To answer this question, one needs to look at the conflicts that are not well managed by the integrative system, and therefore end up in power system confrontations. There are two critical indicators. The first one is the homicide rate per one hundred thousand inhabitants which is a key indicator or the within society power confrontations. The second one is the number of people dying in wars per one hundred thousand inhabitants which is a key indicator of confrontations between societies.

Does Democracy Reduce Homicide Rates?

The homicide rate (intentional homicide per one hundred thousand inhabitants) is an indicator of the quality of the integrative system of a given society. It does not relate to the degree of economic advance of a society (measured as the GDP per capita), nor does it relate to the uses of force by the society to prevent it (measured by prisoners per one hundred thousand). A simple statistic illustrates this fact. Figure 6.3 shows homicides rates vs prison population rates and there is no correlation worldwide. Which means that the use of power to put people in prison does not reduce the crime rate. Figure 6.4 shows homicide rates vs GDP per capita and again there is no correlation. The two together suggest that homicides are consequence of belonging failures in the integrative system. A thesis that has been fully documented in my book in social order[243].

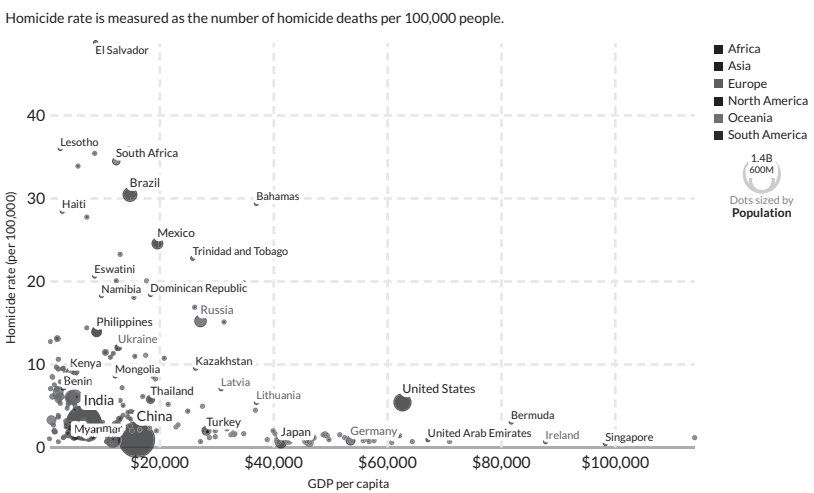
[243] Obregon, C., 2019. *Social Order: Harmony and Conflict in Human Societies.* Amazon.com. Research gate.com

FIGURE 6.3 HOMICIDE VS. PRISON POPULATION RATE



Source: UN Office on Drugs and Crime (via World Bank), World Prison Brief (2018)

FIGURE 6.4 HOMICIDE RATE VS GDP PER CAPITA, 2019



Source: IHME, Data compiled from multiple sources by World Banktable 4.1.
Note: To allow comparisons between countries and over time this metric is age-standardized.

This thesis can be visually reinforced by looking at table 6.1. Notice in here, that the use of force (putting people on jail), even being a richer country, does not necessarily mean less violence. Latin America and the Caribbean is more than twice as rich as South Asia, and has more than five times prisoners, yet it has more than seven times South Asia's homicides. The OECD is almost three times richer that East Asia, and has more than twice the prisoners, yet it has more than five times East Asia's homicides.

TABLE 6.1. GDP PER CAPITA (2017 PPP $)

	Prisoners	*Homicides*	*GD Per Capita*
	(per 100000)		*2017 PPP$*
Regions			
Arab States	126.0	3.3	16487.0
East Asia and Pacific	131.0	1.0	14848.0
Europe and Central Asia	230.0	3.1	18337.0
Latin America and the Caribbean	253.0	22.3	15808.0
South Asia	49.0	3.1	6623.0
Small Island Developing States	456.0	8.9	19770.0
Organization for Economic Cooperation and Development	265.0	5.6	44701.0
World	142.0	5.6	16980.0

Source: Human Development Reports. Last data available. https://hdr.undp.org/en/indicators/194906

Table 6.2 shows how democracies behave in homicide rates. As can be seen the lowest homicide rate is in Autocracies (which include China), followed by liberal democracies (which include the US and the UK), then by electoral autocracies (which include India) and finally by Electoral democracies (which include Mexico). Why these results? Notice, as we said before, that they are not explained by the States use of force (Prisoners) or by the degree of economic success (GDP per capita). They are explained by the strength of the integrative system, which is stronger in the case of autocracies because it is traditionally and very old. As autocracies open into electoral process, mismanaged social conflict that ends up in violence increases from 0.7 homicides to 4.9. As the political regime opens furthermore into electoral democracies, violence increases substantially more to 15.2 homicides. And it only goes down with a con-

solidated new strong institutional arrangement in liberal democracies, in which homicides go down to 3.1 homicides.

TABLE 6.2 HOMICIDE RATES IN DISTINCT POLITICAL REGIMES

Political Regime	Homicides	Prisoners	GDP per capita
Autocracies	0.7	132	16634
Electoral Autocracies	4.9	95	8657
Electoral Democracies	15.2	146	14008
Liberal Democracies	3.1	229	50992

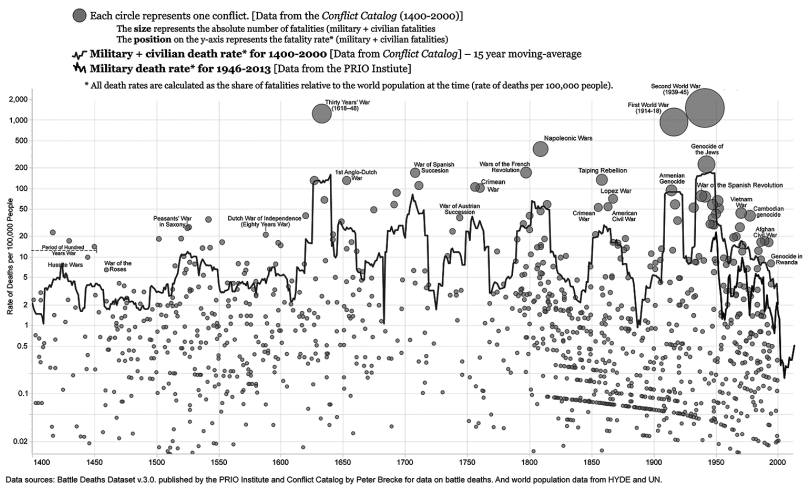
Sources: Prisoners per 100000 from World Prison Brief, December 2021. Intentional homicides per 100000. GDP per capita in 2017 international PPP dollars. Both homicides and GDP come from World Bank, World Development Indicators, last updated 09/16/22.

The previous results warn us of the importance that in a democracy has the proper institutional arrangement. What distinguishes liberal democracies from electoral democracies is that liberal democracies have developed a complex law which is protected by in dependent legislative and judicial powers. Citizens have further individual and minority rights, are equal before the law, and the actions of the executive are constrained by the legislative and the courts.

IS IT TRUE THAT DEMOCRACY GENERATES PEACE?

As can be seen in figure 5.1 and table 5.5 the percentage of countries in the world with electoral and democratic rights has increased since 1820. Thus, democratic, and electoral rights increased in the two waves of globalization (1870 to 1914, and 1950 to today). But the first wave of globalization led to the First World War, the hyperinflation of the 20's, the 1930' GD (Great Depression), the Second World War, and a growing number of deaths in conflicts per one hundred thousand inhabitants. While the second wave of globalization is related not only to a higher global progress than the first wave, but also to relative peace, as the decrease in the number of deaths in conflicts per one hundred thousand inhabitants shows, see figure 6.5.

FIGURE 6.5. GLOBAL DEATHS IN CONFLICTS SINCE THE YEAR 1400



Source: https://slides.ourworldindata.org/war-and-violence/#/6

The liberal literature has mainly focused on the second wave, in which both democracy grew and peace (mainly between large, developed countries) was achieved; but a longer-term view does not support this thesis. In the first wave increased democracy was associated with less peace. Moreover, if one looks at figure 6.5 one can appreciate that the very low number of deaths in 2000, is like many historical periods in which all the countries were autocracies.

The argument that it is in the democratic culture to settle conflicts by peace, as opposed to the authoritarian culture, is unconvincing. The historical fact is that the European democratic countries and the US have started many wars against other countries to protect or expand their imperial interests. From 1801 to 1922, Great Britain participated in 94 wars (excluding the First World War), and from 1922 to the present in 41 wars (excluding the Second World War); and most of these wars were fought against countries that could never have invaded Great Britain[244]. The US participated in 57 wars between 1801 and 1922 (including many Indian wars, and excluding the First World War), and in 30 wars from 1922 to

[244] See Laycock, S. (2012). *All the Countries We've Ever Invaded – And the Few We Never Got Round To*. The History Press. ASIN 0752479695. See also https://en.wikipedia.org/wiki/List_of_wars_involving_the_United_Kingdom

the present (excluding the Second World War); all of them against adversaries that could not invade the US[245]. While China only participated in 10 wars between 1801 to 1922 and in 14 wars from 1922 to the present[246]. Thus, democracies are not necessarily peaceful.

We maintain that the empirical fact that recently less wars are fought between liberal democracies is not explained by the argument that democracies are peaceful, but by other factors such as: 1) The Second World War created a singular leader, the US. 2) The lessons of the First World War created the possibility of creating global institutions in the West. 3) The Marshall Plan (conceived for the recovery mainly of Europe and Japan). 4) The new nuclear power prevented a direct confrontation with the USSR; thus, instead of a military war, a Cold War with the USSR started, which was a reason for the consolidation of NATO, which largely explains why less confrontations between democracies have happened.

Democracy and the World Problems

Democracy is nationally bounded. And as we have seen democracies do go to war whenever their national interests are at jeopardy. Moreover, in the real life, the ideal of a world of only democratic countries is not achievable. Democratic values are far from being universal, there are many distinct ideologies and ways of living in the world; and therefore, one of the keys to global peace must be ideological tolerance.

World progress and peace require free trade. Free trade is one of the key ingredients needed for progress, and it has the advantage to bring people from different nations together. But bringing people from diverse nations together may end up in conflict like in the first wave of globalization, or in peace like in the second wave of globalization. The difference were stronger international institutions in the second wave. Thus, institutions and trust are required for progress with peace. And for trust to be developed ideological tolerance is needed.

Economic progress, given strong national divergent interests may become unstable and lead to military conflicts. CI has argued that the only

[245] See https://www.thoughtco.com/american-involvement-wars-colonial-times-present-4059761. See also https://en.wikipedia.org/wiki/List_of_wars_involving_the_United_States

[246] Graff, David Andrew, and Robin Higham, eds. *A military history of China* (University Press of Kentucky, 2012). See also https://en.wikipedia.org/wiki/List of_Chinese_wars_and_battles

way out of this is to build solid international institutions that foster mutual trust[247]. Thus, the WTO, the WB and the FMI must be supported by an international law and international accepted courts and mechanisms for enforcement. It is under an accepted common legal framework that a new Global Security Agency must operate, with the aim of establishing an adequate balance of powers directed at reducing the military armament and the nuclear power of the diverse countries in the world. And it is under an accepted common legal framework that problems like global health, global climate and international crime can be addressed.

The novel CI guide for international relations is not an ideal proposal, it is a required response to the globalization brought about by the ICTR. We live today in a globalized world; the ICTR has globalized the economic system, and the nuclear technology has globalized the potential consequences of a traditional war. The Russia-Ukraine war must alert all of us that something is going awfully wrong in the way we manage the world. Not only today everybody around the world can watch the war and the killing of innocent people in their home's TVs. But everybody is suffering the consequences of the war. Many people around the world are starving because of the food scarcity produced by the lack of exports from Ukraine and Russia. Many others are suffering the inflation caused by increased energy prices. Moreover, the increase in energy prices and of food brought about by the war add up to the previous inflationary problems consequence of the 2020 GP[248]. And the increasing possibility of building inflationary expectations has forced the central banks into aggressive increases in interest rates, that still may take the world into a recession, that would be absurdly costly. We are just too interdependent in the modern world. And even crisis in relatively isolated countries like Ukraine and Russia may have all sorts of negative consequences for the global economy, and maybe even for the global peace.

The CI's guide to international relations does not ignore the difficulty of creating strong international institutions, given the prevalence of the national interest of powerful nations. However, the pragmatic question is: What should be the guide for international relations? Marxism should not even be mentioned, not only because it does not stand any real possibility, but because it is also scientifically indefensible. Radical liberalism has failed, it is too idealistic, and it does not stand a real chance in a world in

[247] Obregon, C. *The Economics of Global Peace*., op. cit.

[248] Due to supply chain problems and the high demand created by the expansionary governments' adjustment programs.

which only 13% of the population lives in liberal democracies. Realism is restricted only to the power system, the solution it proposes is not stable and will lead to vey suboptimal solutions, with frequent military confrontations and the consequent damage to economic progress. Thus, we need to do something else, something new. We need to change our minds; we must understand that we truly live in a globalized world. One that will never be dominated by just one ideology; thus, a world in which ideological tolerance is required. We should move in the direction of strengthening the international institutions. It will be a slow process, and it will take a long time; but it is the only possible pragmatic route for a world whose technology is globalizing the production processes so fast, a world that it is becoming ever more interconnected, in economic, cultural, and military terms.

The implications of the ICTR are not yet fully understood by the dominant ideologies. On one side, due to the ICTR, the West's productive alliance is with China. On the other side, China's political regime is condemned as authoritarian and illegitimate. On one side, freedom reflected in free trade is praised. On the other side, the WTO is dismantled, and nationalistic and protectionist policies are on the rise in the West. On one side Europe first increases trade with Russia, on the other side rejects Russia from becoming part of the European Union and of NATO. All these inconsistencies can be explained by the fact that the global conceptual system and its corresponding institutional arrangements is lagging the technological reality imposed by the ICTR.

Global progress does not necessarily bring global peace, nor is it necessarily self-sustainable. We must not forget that the first wave of globalization resulted in the First World War. Thus, as we learnt then, whenever global institutions do not rise to the challenge of the new global technological changes, progress may be followed by dark ages. We already have had three major crises in the last decade and a half: The 2008 GFC, the 2020 GP, and the Russian-Ukraine 2022 war – which is the largest one since the Second World War. It is not fortuitous, the ICTR started in 1990 and rapidly accelerated globalization, and the global institutions are not up to the task. In the 2008 GFC the globe's financial leaders thought that the sub-prime crisis in the US was a local crisis, that would be solved by the local markets – this was, for three years, the official statement of the Economic Report of the President. They never understood the deep globalization of the financial flows brought about by the ICTR, and their potential to generalize the crisis to the whole developed world[249]. The

[249] See Obregon, C., 2018. *Globalization Misguided Views*., op. cit.

2020 GP was consequence of the interconnectedness between China and the rest of the world and was confronted by a WHO with a budget like a large US hospital – which was just not up to the task. In the Russia-Ukraine war, people all over the world are following it through the web and the TV networks. President Zelensky has spoken to many parliaments around the world asking for help and has been heard by millions of people. And therefore, politicians are facing political pressure, from the public in their countries, to intervene in favor of Ukraine, beyond what they would do otherwise. A local war, consequence of Russia's invasion of Ukraine, has been internationalized, and has risen to a global dimension that creates for the first time the risks of a nuclear war. It is true that the risk is still low, but it is no longer near to zero as it used to be, and this is very worrisome.

Despite all its virtues, the ICTR creates risks, that the world needs to confront such as: the changes in the global climate, or the exploitation of natural resources in developing countries with polluting industries, or the rapid growth of international crime due to fiscal paradises and the ease of global communication and transportation.

However, instead of witnessing the building of strong global institutions to confront the challenges of the ICTR, we have seen an international rise of populist nationalism that explains the Brexit movement in the UK, Trump's influence in the US, Brazil oscillating between the right populism of Bolsonaro and the left populism of Lula, Lopez Obrador winning the elections in Mexico, Le Pen's recently renewed popularity in France, Italy recent elections won by the extreme right, and Biden's policy that the US will only buy "made in America". This is not good news for the world. At best, populist nationalism will endanger progress, and hinder the world of reaping the benefits of economic growth that the ICTR could produce. It will reduce global trade and worldwide economic interdependence, and delay substantially the growth possibilities of a large global middle class. At worst, a populist nationalism will seriously endanger global peace.

If we do not act decisively, the globalization brought about by the ICTR will likely continue exacerbating all kind of global problems. Strengthening the global institutions, as CI proposes, is not an option, it is a must – it is the pragmatic way for the world to face the ICTR. Strengthening the global institutional arrangement is the critical social choice of our times and it will have to be taken by global leaders under the influence of global civil society institutions.

CONCLUSION

Social conflict is unavoidable in human societies, it is built in in our evolutionary roots. Conflict in societies is due to four reasons, the need of individuality of the genetic pool to maximize life survival chances, the competition for scarce resources, that we were evolutionarily designed to belong to small groups, and the representational nature of reality in the human mind. Belonging failures occur in any of the three belonging ways. Love belonging failures create insecure personalities and all sort of psychological and sociological pathologies. Social belonging failures may be rooted in any one of the three social systems. Economic conflicts are due to scarce resources and to changing economic interests due to technological innovations. Integrative system conflicts are due to the representational reality of the human mind, and they are political, ideological, religious, ethical, legal, racial, sexual, and so on. Power conflicts may be consequence of preventing deviant behavior within an in-group or society, or of confronting out-groups or other societies. Existential belonging failures may generate individual anxiety, and in addition may create unsustainable relations of humans with the rest of the universe – as the global climate crisis has shown.

Social conflict is required for societies to change and adapt to changing circumstances. However, social order is also a survival requirement. What gives continuity to the societies from one social order to the following one (incorporating the social changes brought about by social conflict) is the institutional arrangement and its corresponding conceptual system. In Western democracies social change, as compared with traditional societies, happens very fast for several reasons, technologies change more rapidly, the ICTR is bringing the world closer together, and social participation is more intense. While the rapid social change is good news, it brings along the possibility of increasing social conflict that must be well managed to maintain a changing but stable social order. Informed deliberative participatory democracy, even if it was possible to avoid the impossibility results, is not up to the task to be able to manage social conflict into an adequate social change that leads to a new acceptable social order. It is not today's "will of the people" (even if it could be found – which as seen in the previous chapter is not possible) what maintains the required transitional social order – historical institutions are required. Representative democracy is a very complex system sustained by a sophisticated institutional arrangement, in which for key decisions experts

can be heard, and in which drastic changes are usually avoided by built in rules of decision that foster social stability and order.

Social conflict is only partially express by democratic participation, there are other routes for social conflict to be shown like social manifestations, civil society and so on. The quality of a liberal democracy is its capacity to manage the conflict between the small groups that form the large society in such a way that cause a social change toward a more beneficial (for the community and for the minorities) social order.

Democracies do not necessarily manage conflict better than traditional societies. It is not true that democracies go less to war than authoritarian states, and it is not true either that they manage better internal conflicts. In this chapter it has been shown that the number of global deaths in wars per one hundred thousand people has not been reduced with the increase in democracies in the world. Moreover, democracies do have more homicides per one hundred thousand people than autocracies. These statistics are explained by the fact that autocracies are also for the most part legitimate systems. But what is relevant is not to compare autocracies with democracies. Because once a society has differentiated the individuals in terms of their rights there is no way back, the only acceptable political regime is a democracy. The interesting result is that the homicide rate goes down significantly when we compare electoral democracies with liberal democracies, which shows that the way out for a democracy to manage internal conflict more properly is strengthening its institutional arrangement.

Once a society has differentiated the individuals based on their rights, there is no way back to previous regimes. Under these circumstances, as Winston Churchill argued, with all its defects, democracy is the best available option. But democracy must be understood for what it is: a second-best option that has, as we have been arguing, many limitations. Not only technically the "will of the people" cannot be found (and we must conform ourselves with second-best options); but in addition, democracy is limited to today's social choices, that are already restricted by the historical path of the institutional arrangement (and its corresponding conceptual system) of the culture in question. Moreover, democracy to operate properly requires a sophisticated institutional arrangement. Without the proper institutions, democracies may collapse in either illegitimate authoritarianism or illegitimate authoritarian populism. Thus, while it is crucial that representative electoral chosen officials listen to the

people[250], it is also important that they take critical sophisticated decisions based in experts' opinions. A representative democracy is a very complex system that should operate as such and cannot be replaced by informed deliberative participatory democracy. The latest, while important, should be restricted to very define projects for small communities.

The world seen as one culture is a not a democracy, but that does not mean that it cannot manage social conflict adequately. It does not need to become a democracy, but it must be a legitimate political system. But to become one a much stronger institutional arrangement is required. Strengthening the global institutional arrangement is the critical social choice of our times and it will have to be taken by global leaders under the influence of global civil society institutions.

[250] Allowing public manifestations, civil society institutions, public opinion surveys

CHAPTER SEVEN: JUSTICE, ETHICS AND SOCIAL CHOICE

Can justice or ethics provide the basis to get away from the impossibility results? How do justice and ethics relate to SCT? Are justice and ethics required to maintain social order? How do justice and ethics relate to social change and social conflict? What is the relation between justice and ethics and a democratic political regime? Are there impossibility results in the judicial decisions? And if so, what do they mean? What is justice? What is ethics? How does justice differ from ethics? These are the central questions that will be address in this chapter.

SOCIAL ORDER

Hobbes thought that an implicit social contract was the source of the power of the king. His idea is simple; individuals agree in common rules imposed by the State to prevent living in a continuous threating aggressive environment. The idea sounds convincing at first, until one realizes that the State lacks always the resources to be the vigilant of all individual actions. Therefore, if one were to apply game theory it is easy to see that the winner's strategy is to agree in the implicit contract, and then violate it with our individual actions. Social order could never be established just by individual contracts which agreement the State should supervise. Social order mainly depends upon the integrative system, it is only by exception and for limited cases that the power system comes to aid the integrative system.

It is only because individuals do behave ethically, that the society can establish social order. In a society in which individuals would behave socially well only for fear of the State, no social order equilibrium will be attained; because it would take unlimited resources to check all the time in all the individuals' behavior. There are empirical facts that confirm this view. There is no correlation, for example, between the State's deterrence capacity and the rate of crime in distinct societies. Which does not imply that deterrence is not necessary; but clearly indi-

cates that it only works, if there are many other integrative conditions that must be satisfied by the institutional arrangement[251]. Individual ethical behavior cannot be explained just in terms of self-interest. It can be shown in an Edgeworth Box, that conditions to explain altruism based in pure self-interest are extremely restrictive[252]. Behavioral Economics has found empirically, in fact, that people is altruistic even when it is contrary to their self-interest[253]. Individual ethical behavior, therefore, is needed to establish social order. Thus, it is required to explain where do the individual values that explain his ethical behavior come from. This is the task of CI's Ethics of Belonging.

While it is true that the human mind does not have access to universal essential ethical values, it is also true as well that societies develop social ethical values that nor only guide individual action, but that also inspire the written law and its interpretation. What is lawful cannot be dissociated from what is ethical, attempts in this direction by Rawls and others, as we will show, can be counted as a failure.

What is ethical and what is lawful changes for one society to the other. Human sacrifice was allowed in Primary societies. In Rome the house lord's rights included using, abusing, and killing if he so decided, any member of his house, whether it was a slave or not. The feudal lord had among others the right of bolt – to go to bed, before the husband, with the wife in any new wedding that happened in his feud, slavery was legal in many countries of the world until the nineteenth century. In Mexico today, in Chiapas, as in many other places around the world, woman can still be bought, and a man is allowed to have many wifes. However, as we will see there are evolutionary ethical belonging constrains, that all societies must satisfy to survive; the most important is, that the well-being of the social group must be preserved. All the events that we have mentioned before, cannot be just discussed in the light of Western's individual humanism; they had a different connotation in the context of the conceptual system and the institutional arrangement of the diverse societies mentioned. In primary societies, human sacrifice happened to provide energy to the universe; because it was thought that everything was cosmogony united. Moreover, because of reincar-

[251] For more in this topic see Obregon, C. 2019., op. cit.

[252] An economic agent A will behave altruistically with another agent B, with respect to a good 1, only when agent B has less than what A considers the minimum acceptable in the n-1 existent goods. See the appendix in Obregon 1984, for the demostration

[253] See Obregon C. *Beyond Behavioral Economics*., op. cit.

nation, death had a very different meaning for them. In nomad tribes, it often happened that mothers must kill a newborn baby, because they could only carry one on their backs; but it was thought, that the baby will reincarnate in the next baby of the same woman. In Rome, the house lord's rights were not given for him to kill or abuse all the members of his house; the lord represented the Roman's values, and he supposed to be wise and the best one to decide what was best for the community living in his house. The house lords provide stability to the values of the Roman community; and therefore, were key in maintaining social order. Slavery was part of a productive system, and it did not necessarily represent the abuse of the slaves. It is well known that in the south, after the war with the north in the US, slaves were often refusing to become free. In Chiapas, a daughter is sold to become someone else's wife, to preserve her life and those of her family, which usually could not survive economically otherwise. But there are conditions that the buyer must satisfy in these traditional communities; he becomes responsible of the new wife for life and were he not to fulfill his obligation he might get kill. In all these cases the intention was to preserve social order, and to increase the survival chance of the social group.

We have been educated to condemn any system of values which is not compatible with the Western's humanism; but that is incorrect. Western societies also had been extremely cruel themselves, arguing that it was required for the well-being of the social group. Think for example: in the killing of the Jews by the Nazis, in the atomic bombs at the end of the Second World War, or in the bombing of Iraq using the pretext of weapons of mass destruction that never existed. But then What is ethical and what is not? Where does the ethical values that inspire individual behavior and the law come from? In what follows, to answer these questions, we will develop the CI's Belonging Justice and the Ethics of Belonging.

RAWLS' JUSTICE

If one refers to justice and obliged contemporary reference is John Rawls. Following both Hobbes contract theory and Kant, Rawls wanted to differentiate justice from ethics. Justice for him come from a law that implies a social contract that may be derived from distinct

and competitive ethics. For Rawls, the social order is founded on a social consensus about what is just. Rawls, inspired by Kant, proposes a hypothetical social contract in which each citizen does not know what position he/she will occupy in the society that is designed: the veil of ignorance. Rawls argues that, in this way, the bias of individual passions, which Locke was so concerned about, is avoided; and then, the true rational social contract is reached, which is the basis of social order. Rawls points out that the individuals who make the hypothetical contract, which he proposes, would surely agree on two principles of justice, which are foundational to the social order. These are, as they are exposed in *Political Liberalism:* 1) each person has the same right to claim a completely adequate scheme of basic rights and freedoms, which will be compatible with the same scheme for all, and in this scheme the political liberties, and only these, must be guaranteed at their proper value; and 2) social and economic inequalities have to satisfy two conditions: first, they must be identified with positions and trades open to all, under conditions of impartial equality of opportunity; and second, it has to be of the greatest benefit to the most disadvantaged members of society. Rawls' proposal is a direct criticism of classical utilitarianism and a defense of the rights of each individual. For Rawls, the social order is not founded in optimizing social welfare, but on establishing a just society. Subsequently, in *Justice as Fairness: Politics not Metaphysics*[254], Rawls introduces the distinction between comprehensive disciplines, that cover the entire system of beliefs and values, and a political conception of justice that only refers to political values. This idea would be used in *Political Liberalism*[255], in which Rawls argues that the two principles mentioned refer only to political life, and as such, are generally accepted among people who differ among themselves on ethical issues. In this way, he makes a separation between the ethical and the just - society can be plural in that there are different ethics, but in terms of what is just, a consensus can be achieved. Such consensus is for him the basis that explains the social order; and it comes from the acceptance in modern democratic societies of equal liberties for all citizens. The consensus, in this new definition, does no longer apply to all cultures, but only to modern

[254] Rawls, J. 1985. "Justice as Fairness: Political not Metaphysical." *Philosophy & Public Affairs* (Summer 1985), 14(3):223-251.

[255] Rawls, J. 1993. *Political Liberalism*. The John Dewey Essays in Philosophy, 4. New York: Columbia University Press, 1993.

democratic societies. The contractual theory of Rawls is a great contribution, in that it rationally bases the social order on what is just; and no doubt, justice is key in Western societies. Rawls's intellectual exercise: 1) highlights the obvious contradiction between the cultural and liberal values of the natural rights of man in Western Society and utilitarianism, which argues that social welfare must be maximized. A contradiction that Mills had already understood but could never resolved; and 2) reveals the contradictions between the natural rights of man and liberalism; for there is nothing in the free market that guarantees that individuals will have access to the social well-being they deserve according to the just society promised by the natural rights of man. One must remember that the Declaration of the Rights of Man and the Citizen of the French Revolution of 1789, establishes among other rights the equality of opportunity, and in the Declaration of American Independence, Jefferson names among natural rights the desire for happiness. Rawls takes equality of opportunity to its ultimate consequences, and this is a fundamental contribution.

There are, however, substantial criticisms of Rawls. First, the hypothetical exercise he proposes cannot happen in the real world; in which, it is not possible to deprive individuals of their interests. Second, his initial vision in the *Theory of Justice* that the principles about what is just are universal, and therefore common to all cultures and historical times, is not sustainable, because as we have learned the human mind does not have access to such universal principles. This second point is latter on recognized by Rawls, and that is why, in his most recent versions, he bases these two principles on political considerations relevant only to modern democratic societies. Third, his argument that there is a consensus in modern democratic societies about what is just, despite ethical pluralism, is impossible to defend given the sharp political-social controversy over so many issues; the discussion on abortion is just but one of such examples. Rawls's intellectual exercise does not really separate what is just from what is ethical. What it really does, is that it uses some of the moral preconceptions of Western rational ethics to show some of the fundamental contradictions of utilitarianism, liberalism, and radical egoism. Rawls in his *Theory of Justice* does not demonstrate, but assumes, that the individual is free, equal, and rational, and that he has access to the principles of justice which Rawls defends. And later, he retracts himself. In *Political Liberalism,* he assumes that only the Western individual has access to the ethical value of equality of opportunity (understood in a particular

way-that of Rawls); but this access, he thinks is evident in democratic societies. Rawls assumption in *Political Liberalism,* although more restrictive, is also a non-demonstrable generalization. In fact, the opposite of what he affirms is evident. Because the consensus that Rawls proposed, was not accepted by his critics, and his principles have not had the immediate acceptance of all other social thinkers. On the contrary, it produced the criticism of many. Rawls' proposal was criticized by Robert Nozick [256]from the perspective of liberal ethics; by Michael Sandel[257]from the perspective of community ethics; and by Robert Paul Wolff [258]from the perspective of Marx's communal ethics. The fundamental problem with Rawls, from the point of view of the liberals, is that he does not understand the relationship between selfishness and individual incentives on the one hand, and social welfare and economic growth on the other. Rawls also failed to convince the proponents of community ethics, for whom there are individual ethical obligations in relation to the community that go far beyond what Rawls proposes. For the defenders of community ethics, the individual has obligations of solidarity with his community. As an example, Sandel refers to General Lee's decision to fight the American Civil War with the Southern Confederate Army - his community - even though Lee personally was against slavery[259]. Undoubtedly, the proponents of community ethics have a valid point, otherwise we could not explain the concept of Nation, which has been one of the most dominant in the history of mankind. The Marxists do not accept his political principles either. For them, Rawls uses an anti -historical essence of man that does not recognize class conflict and its influence on individual values. They argued that Rawls did not understand that injustice is the very essence of the capitalist system, and that there is no possible solution without reaching the human communist society predicted by Marx. All these criticisms demonstrate what we have already argued that there is nothing in the neurobiology of humans that allows them to understand universal truths or principles, not even restricted to a historically specific cultural subset. What Rawls proposes, is his new social ethics with his own initial essential assumptions. The fact is, that the social order in Western societies is

[256] Nozick, R. (1974): *Anarchy, State, and Utopia,* Basic Books, New York.

[257] Sandel, M.J. (2009). *Justice, what s is the Right Thing to Do*. Farrar, Straus and Giroux, NY.

[258] Wolff, R.P. Understanding Rawls: A Reconstruction and Critique of "A Theory of Justice" (Princeton: Princeton University Press, 1977).

[259] Sandel, M.J. (2007). *Justice, a Reader*. Oxford University Press, NY. p.332-333.

defined by the living political discussion of different ethics about what is just. This pluralism and the discussion are what serves as the basis for both the written justice and its interpretation. Rawls's attempt to argue that there is a political consensus on justice despite ethical pluralism can be considered a failure.

Wiggins, from a Neo-Humean perspective, criticizes Rawls's rationalist view that the individual has access with his reason to universal principles of justice. Wiggins is right, Rawls's theory of justice is only sustainable under the Kantian rationalist preconception that reason can understand what is just. Rawls only demonstrates what he presupposes in the first place. Moreover, as we had mentioned there are also unsurmountable practical problems in the application of Rawls' conception; because in the real world, individuals have interests, so that, even if we accept Rawls' proposal that they can have rational access to what is just, we still would not have demonstrated that individuals would be willing to accept a just society that violates their initial interests. That they are willing to sacrifice personal interests, once the hypothetical exercise ends and their interests are returned to them in the real world, involves much more than rationally understanding what is just. It implies being moral in actions - being willing to sacrifice for what one knows is right.

Rawls is very critical of Hume's concept of benevolence and affirms that a selfish ignorant must be preferred to an informed compassionate man. And he is right, in that benevolence is not sufficiently powerful to explain social order. But neither is reason. The problem with benevolence, is that it leaves unexplained the existence of aggression in societies: the whole problem of power and the struggle to define social order based on individual interests. The problem with reason is that it cannot explain why humans should act according to their reason, and not according to their interests. Some thinkers like Gauthier, following Hobbes, have argued that it is in the best interest of each one to act according to rational principles. But this cannot be proven, as Vallentyne[260] has shown; and as the existence of multiple Nash equilibriums reveals. Gauthier's solution is that once the rational contract is established, each individual accepts to optimize their individual interest restricted by the social contract; but this is a contradiction, because it is always for the benefit of the individuals to violate the social contract once it has been established; and the coercive

[260] Vallentyne, P. (1991). Contractarianism and Rational Choice: Essays on David Gauthier's Morals by Agreement. Cambridge university Press, UK. You're listening to a sample of the Audible audio edition.

power of the State, as we have already mentioned, is insufficient to stop them. And if they do not violate the social contract, is only for consideration of ethical principles that are part of the social conceptual system, which is specific to each society, in each historical time, and in some societies is subject to be permanently discussed.

Ideas are necessary because they are the counterpart of the institutions that order social life. Rawls has proposed a new idea, a new ethics-justice to compete with several others which already constitute part of the Western culture. And he has already had a great influence on the social and political thought of the West.

JUSTICE AND ETHICS IN SEN

Sen develops his theory of justice and ethics mainly in *The Idea of Justice*[261]. For Sen, it is not possible to found justice in Rawls's hypothetical contract, which originates in a closed impartiality to a specific community; justice requires universal ethical principles that generate an impartiality open to man in general[262]. Sen refers to the impartial spectator of Smith (who in this author is God), whose requirements are that reason is used to reflect, if what is considered just for one and for his community, would be just for others and their communities; and if the others observing us would consider what we propose just. For him the *social order* is based in social justice, which is only possible if it is based on ethical principles, reflected in the individual behavior of an integral and responsible human, who reaches these principles with the help of his reason. The ethical human not only understands ethical principles but acts according to them. It is not, however, an isolated individual, but one who learns in his relationship with society to distinguish what is moral from what is not. The benevolent feelings of humans are a guide, but they are insufficient; the required moral conduct, to establish social order, must be based on reason.

Sen recognizes that there is not a single possible solution to determine which are the ethical principles that should guide individual behavior, and that different cultures, communities, groups, and individuals

[261] Sen, A. (2009). *The idea Of Justice*. Belknap Press/Harvard University Press, Cambridge /London.

[262] Notice the influence of Nussbaun in Sen's proposal to universalize the ethical principles.

can reach different principles. But he insists that there will always be a common subset of principles, that will guide possible agreements between different individuals, groups of a community, between communities, and at a global level; so that, it will always be possible to promote social order by moving towards a less unjust world. For Sen, there are three major distinctions between Rawls's approach and his extension of Smith's impartial spectator. 1) Open impartiality in Smith, refers to all humanity, and that for Sen implies accepting the relevance of others' points of view; versus, closed impartiality in Rawls, which refers to a community of members with common interests -specifically in a Western Society. 2) Smith's comparative approach, between possible decisions; versus, Rawls's transcendental approach of intellectually defining the just society. 3) the focus on concrete social realizations of Smith; versus, the Rawls' search for just institutions. For Sen, the ethical principles of social choice are: 1) Focus on comparative, plausible decisions to consider; and not, on the transcendental ideal justice. 2) Recognize the inescapable plurality of principles competing. 3) Allow and facilitate the re-examination of the solutions taken or proposed. 4) Allow partial solutions. 5) Use diverse interpretations as inputs. 6) Emphasize precise reasoning and articulation. 7) Maintain the role of public reasoning in social choice; social participation enriches democracy. Social choice focuses on verifying that justice is carried out, that something really is done that benefits the lives of people in the real world. *Social order* and justice are based on universal judgments of reason, with open impartiality, avoiding parochialism, using the methodology of the impartial spectator. Which, however, give us a plurality of reasoning with incomplete orderings, which only allows partial solutions, based on comparative frameworks of the possible results of the limited actions that could be taken. For Sen, at a global level, social choice is even more fundamental for justice since there is a lack of a global democracy. For him social choice is the mechanism of public discussion, that allows for the definition of the Social Welfare Function, that Bergson and Samuelson were looking for – without the problem that the Arrow's theorem presents. Therefore, social choice for him is also the key to establish social economic order.

Sen's vision of justice and ethics has great contributions, such as highlighting the need of having an ethical individual to be able to establish social order and a just society. As we have already mentioned, it is not possible to have social order based only on a social contract, as there is no nothing that guarantees that the individuals will not violate the contract.

If individuals are only guided by their interest, once the just society of Rawls's hypothetical contract is established, then it is in the interest of many individuals to violate it. Another important contribution of Sen is to emphasize that there is not only ethical plurality but also, contrary to what Rawls affirmed, plurality of political conceptions about justice, even within Western societies. Written justice in Western societies reflects justice considerations, based on the discussion of different ethical and political points of view. There are, however, many unresolved points in Sen's vision of justice and ethics.

Sen's first problem is like that of Rawls, that there is nothing that guarantees that all individuals will use his methodology of the impartial spectator, and even less that they will behave according to the morality they discover with their reason. In Smith this is guaranteed - as in Kant - because God is the impartial spectator, who implants his universal law in the hearts and minds of humans and guides them to goodness and to love humanity as themselves. But in Sen, nothing guarantees that the social ethics that will be chosen is that of the impartial spectator, that he has proposed. And, even if we suppose that the individuals used the method of the impartial spectator, nothing guarantees that they behave according to the universal law that they discover with their reason. It is not a problem of whether they discover different universal laws, as this partially Sen recognizes; but whether they will seek a universal law, and then whether they will behave according to it or alternatively according to their personal interests. The second problem of Sen is that there is an incompatibility between his theory of freedom exposed in *Development as freedom*[263], and his theory of justice introduced in the *Idea of Justice*[264]. In the latter, as we have already pointed out, Sen adequately criticizes Rawls' proposal that there is an overlapping consensus on his political principles, that can be derived from the values of Western Society; and shows that, even using the veil of ignorance technique, one does not necessarily reach Rawls's principles. Sen argues appropriately, that in Western societies there is not only ethical plurality, which Rawls recognizes; but also, plurality in terms of visions of what is politically just. Sen rejects the overlapping consensus of Rawls and replaces it with that of incomplete orderings based on the discussion between different points of view on justice. But if we

[263] Sen, A. (2000). *Development as Freedom*. Anchor Books, New York.

[264] 2009., op. cit.

accept the notion of incomplete orderings of *The Idea of Justice,* then there is nothing to guarantee that these incomplete orderings will result in Sen's basic capabilities related to freedom. The freedoms of Sen mentioned in *Development as freedom,* which are derived in the space of what he calls the capabilities, do not have to be accepted by all, nor have the universality that he confers to them in this book. The third problem of Sen: is that if there is a plurality of conceptions about justice and incomplete orderings, nothing guarantees us that there will be, as he affirms, always partial solutions that reduce injustice. And therefore, nothing that guarantees *social order*.

The truth is that Sen's thought both in *Development as freedom,* as well as in *Rationality and freedom*, is in the Kantian tradition. And despite all the efforts of Sen in *The Idea of Justice* for accepting some form of ethical relativism, in that there are no ethical or justice principles universal and unique; the fact is, that the results that Sen seeks with his proposal of social choice, require a Kantian universal rationality in four of his central propositions. 1) that all individuals use their reason in the sense of the impartial spectator to arrive at open impartiality; so that even when they differ in the universal principles they find; they all coincide in the necessity to look for universal principles. 2) that all individuals are moral -i.e. socially responsible - and are willing to act based on the universal principles that their reason indicates. 3) that there is some overlap - based on incomplete and partial orderings - between the universal principles found by different individuals in diverse communities and cultures, such that it is possible to agree on how to reduce injustice in the real world. 4) that the result of this overlap is that all individuals, in all cultures, want with their reason the basic freedoms and capabilities that Sen proposes.

Sen's integral human is an ethical individual who: 1) is capable of understanding what is moral and just at the social level with his reason; and 2) is willing to act socially in accordance with his social responsibilities (as dictated by his reason), and not in function of his personal interests. The ethics of Sen is universal and applicable, according to him -in terms of basic freedoms-, to all cultures; since he affirms, that all individuals universally desire the capabilities listed by him. Which necessarily means that their reason must dictate to them the basic freedoms proposed by Sen. Finally, despite all his efforts to deny it in *The Idea of Justice;* Sen proposes a new rationalist ethics and should be understood as such.

Sen's ethics differs from that of Rawls's in that the latest bases *social order* on the contractual interest of the veil of ignorance, while Sen bases it

in the direct ability of reason to access universal ethical principles - even if they may be diverse for different individuals, groups, communities, or nations. Rawls argues that his principles of justice are unique to Western culture. Sen uses partial orderings to argue that there are always a subset of common principles that create margins to reduce injustice in the real global world. In Rawls, humans act respecting the hypothetical social contract; in Sen, humans act respecting the principles dictated by their reason based on an open impartiality, guided by the methodology of the impartial spectator. In Rawls the space of liberties is materialized in minimum primary goods, in Sen it is materialized in basic capabilities. Finally, both Rawls' and Sen's are rationalist Neo-Kantian ethics-justice theories, with a priori philosophical preconceptions (although different in each of them), which they seek to demonstrate a posteriori.

Sen starts in *Development as Freedom* finding himself rationally the capabilities that he argues all humans should wish to have; and pretends, unsuccessfully, to show that satisfying these capabilities produces economic development. Then, he introduces in *Rationality and Freedom* a Social Welfare Function based upon a social choice that allows interpersonal comparisons based upon ethical-justice considerations, and by doing this establish social economic order – i.e., order in economic issues. And then, in the Idea of Justice he generalizes social choice to justice, and he uses it to explain the *social order* in general (as distinct from the social economic order which relates only to economic issues). But he is unsuccessful in the *Idea of Justice,* to show that there are always overlapping partial orderings, therefore he cannot explain the social order, whether in a community, a nation, or at the international level. This failure of course, has the implication that it is also impossible to build the Social Welfare Function, and therefore he cannot explain either the social economic order. It can be concluded that Sen's theory of justice is not able to explain international social order. Moreover, it is also unable to explain social order at the national level, because even at this level nothing guarantees that Sen's partial orderings exist; and even if they exist, nothing guarantees that they will be enough to establish social order. In fact, democracy exists because contemporary societies explicitly have recognized that they cannot ordered the social world through reason; that is why the vote exists. Moreover, Sen's partial orderings do not establish a Social Welfare Function capable of providing social economic order – neither at the international nor at the national level; because people may just not agree rationally as to what should be socially preferred.

CI'S BELONGING JUSTICE

In Western communities the plurality of visions is synthesized in an explicit agreement that is the written law; and there is a balance between different powers in the democratic society, that prevents the abuse of power by a few members. But at a global level, without a democratic society, nothing guarantees that an agreement will be reached. There is a fundamental distinction between the declaration of human rights of the American Independence in 1776 and the French Revolution in 1789 on one side, and the United Nations declaration of 1948 in the other. The first two, are the consequence of belonging justice: were made within an institutional arrangement that reflected the changes in the social conceptual system, which meant the declarations of human rights, that were introduced in the written belonging law, and were monitored in their implementation by the State and by a constituted democratic civil society. The third, is not the consequence of belonging justice: it does not have an institutional arrangement of reference. International law is weak because it has neither a State, nor a constituted democratic civil society that oversees its fulfillment. At the international level, there is little hope for significant partial agreements to reduce the great injustices; because, given the absence of a global democracy, the relations between States are more based on interests than on common principles. This explains the little international aid to the poor countries, and the enormous abuses that are committed against the most dispossessed, both by their own powerful citizens, and by citizens of the most developed countries. Sen tells us that in traditional societies, collective discussion preceded democracy as a form of public participation; and that, in the absence of a global democracy, social choice based on informed public participation can be very helpful. But, both democracies today in developed nations, and public discussion in traditional societies, happens within a common institutional arrangement, which implements the changes proposed at the level of the social conceptual system. At the global level there is no common institutional arrangement.

The social belonging order requires two conditions: 1) Ethical agents: an individual guided by a social ethics. Social ethics may not be a homogeneous proposal, but the result of a continuous discussion between different ethics (which may still subsist in the society with disagreements between them, a social ethics in large societies is a set containing the distinct ethics of the small groups that form the large society); which

have in common that they all promote an individual behavior that favors the social order; and 2) Appropriate institutions: an institutional arrangement that implements the social agreements reached in the written law, so that the State and a broad set of democratic institutions of civil society (such as the free press or non-governmental organizations) create a balance of power that prevents the abuse of a few, in favor of their personal interest. At a global level Sen's proposal for social order does not comply with neither of the two conditions. There is not an international social ethics, capable of guiding the individual's ethical international actions. And there is neither a proper international institutional arrangement, nor a common accepted international law.

The belonging social order is explained by a delicate balance between social ethics (which guides individual ethical conduct), individual interests, and an explicit social contract based on democracy (in Western societies), which is expressed in written justice. Written justice and its interpretation, reflects a social belonging vision of what is just that comes from a social belonging ethics, which is not necessarily homogeneous, but can be loosely defined based on the discussion of different ethics with different points of view. Social belonging ethics is part of the conceptual system and is expressed in a set of institutions that guide and define the social order, such as the family, universities, schools in general, NGOs - non-governmental organizations, the Church, and many others The State is responsible for enforcing written belonging justice and its interpretation – which is based on the social conception of what is just. And there is a social discussion about what is ethical and what is not, that continually illuminates and redefines the social perception of what is just, and that ultimately directs changes in the social conceptual system and its corresponding institutional arrangement and, of course, can lead to changes in the written law itself and in its interpretation. The social order requires a social belonging ethics that guides individual behavior; and it would be inexplicable only based on the coercive power of the State. But the latest is also needed, as it would also be impossible to obtain social order only based on ethical or justice considerations. Whether ethics or justice are based on reason or benevolence, or a combination of both, they will always be insufficient to contain the individual passions guided by personal interests. Neither Hume's benevolence, nor Kant's reason, nor reason guided by Rawls's hypothetical contract, can explain the social order-for none of them can stop the social force represented by individual (or group) interests. For

this reason, as Locke already pointed out, the written law is necessary as a specific manifestation of a social contract (in Locke is tacit); which in Western societies, as Rousseau pointed out, must be explicit. The struggle for power between political parties, in democracies, is bounded by the individual vote, the judicial system, and other key institutions like the free press and an institutionalized military force. Contemporary social order implies: 1) the coercive power of the State to implement the rule of law; 2) the judicial system interpretation of the written law (which reflects the notion of justice that derives from the loosely defined social belonging ethics); and 3) an individual ethical conduct (which is guided by the social ethics). The social order in democracies is irrational, insofar as it reflects the will of the majority; but it is always guided by a social vision of what is ethical and by the institutional definition of what is just, and what is not. The individual is guided in his conduct not only by his individual interests, but also by the principles of ethical conduct that were instilled in him since childhood, and that give him a sense of belonging to the group, which is fundamental both for individual's and group's survival. An essential part of any ethical and social vision of justice, as Smith said, is that it must answer the question of: In which cases it is valid for the individual to act only based on his individual interests, and in which cases it is not?

CI'S ETHICS OF BELONGING

Any society is subject to social disarray, whether in the form of crime, civil war, or other forms of social unrest. Social disarray is part of the social dynamics of change, but always a new form of social order is re-established. As we said, social order cannot be based just in the power of the State; it necessarily requires for individuals to behave ethically. Therefore, ethical relativism is scientifically unacceptable; because it is unable to explain the social order that exist in real societies. But then the question becomes What is the source of the ethical values? Historically there had been two answers, the cosmogony of Magic, in the primary society; and the essentialist ethics, that characterize both rationality in the traditional society, and harmony in the Western Society. There are not however, scientific basis to sustain neither magic nor the essentialist ethics.

The rational ethics of both Locke's and Kant's derive directly from St. Thomas's proposal and, like this one, and for the same reasons, they are not scientifically verifiable. Any rational ethics consist of two distinct essentialist proposals. The first one is that humans have access to universal moral principles through his reason. The second proposal is that humans are willing to behave accordingly to these principles. If the first proposal is not fulfilled, the second proposal no longer makes sense. Therefore, since the first proposal is neurobiological unsustainable, it follows that the second is also unsustainable.

However, it is important anyways to reflect on the neurobiological validity of the second proposal by itself. There is neurobiological nothing to guarantee that the individual will act morally. On the contrary, we know that we are born aggressive, that our emotions skew our perception of the outside, and that conflicts of belonging nullify our brain's ability to reason properly. This second rationalist proposal openly contradicts what we neurobiological know about humans, which is that they perceive the outside with images skewed by their emotions. And that they require an emotional basis to reason properly. The morally responsible rational human of Kant, or Sen, simply does not correspond to the human who arises from the neurobiological and psychological evidence of contemporary science. Both Kant and Locke assumed the first proposal that humans had access to universal moral truths; but while Kant also assumes that most humans will behave ethically based on moral principles they had discovered, Locke soon realized that this second proposal, contradicts the real world's evidence. Locke understood that the individual is always skewed by his passions. But his solution is also essentialist. Locke argued, that because the individual is biased by his passions, it is necessary a tacit social contract, and introduces a third essentialist proposal (which replaces the second); which says that the social contract, will lead individuals to live according to divine moral law. But scientifically, there are also no neurobiological basis that can justify this third essentialist proposal of Locke.

Rawls replaces the universal moral principles of the first proposal with the notion that, what is just can be derived from the actual rational analysis of the historical reality of contemporary Western societies. He argues that the notion of what is just is independent of the essentialist epistemology of the distinct contemporary ethics. But as we had seen, what Rawls really did was to introduce, inadvertently, a fourth essentialist proposal to replace the first one. Rawls' essentialist proposal is that: humans can,

historically studying their specific society, understand what is just. Its essentialist origin is demonstrated by the simple fact that different social thinkers came to different conclusions as to what is just (the Rawls's critics that we have already reviewed). It is important to realize that Rawls replaces the first essentialist proposal of rational ethics, but not the second. Rawls requires, as Sen has pointed out, that individuals act ethically ex post contract, that is in accordance with the principles of justice discovered by their reason. And this second proposal, as we said, contradicts contemporary neurobiology and psychology. Sen refuses the first essentialist proposal, and recognizes that different individuals, groups, and cultures will come with their reason to different moral principles. But he introduces a fifth essentialist proposal, to replace the first essentialist proposal he had eliminated. He asserts that even though there are partial and incomplete orders between divergent moral principles, they are sufficient to have a common subset vision of the unjust, and that everyone would agree that it is fair to improve the basic capabilities (freedoms that he lists) of the most dispossessed. Actually. what Sen introduces is a hypothetical social choice, for it never happens. But Sen asserts, that if it were to happen everyone would agree with him (note the similarity to Rawls' implicit contract, where Rawls also asserts that others will discover the same principles as him). Sen's thinking is an essentialist moral proposition; what he seeks, is to convince humans to act according to the ideas he proposes. But also, the point to note is that Sen, like previously Kant and Rawls, leaves the second essentialist proposal intact. Sen also needs individuals to act ethically according to the common partial and incomplete orders discovered by their reason, and not to be biased by their personal interests. But nothing justifies, as we have already pointed out, this second essentialist proposal.

As we had seen the philosophical preconceptions assumed by essentialist ethics cannot be supported scientifically; however, this does not mean that the history of humanity's ethical thinking is irrelevant. As Derrida had argued, great philosophical abstractions remain of great value and importance, even after understanding that they are but deductions from preconceptions that are assumed at the outset. First, because in the process of its deductive expansion they teach us a lot. Second, because they have had great influence on the real institutional world in which we live. And third, because they represent ideologies that propose alternatives as to what the society should do in the future to come. But it is important to present these deductive exercises for what they really are:

intelligent abstract conjectures deduced from philosophical preconceptions, that can be useful for illuminating reality or guiding it. It is needed to remind ourselves always, that, they are not inferred from scientific knowledge. These abstractions, as we have already pointed out, are already part of the institutional history of humans; so that they will most likely will remain with us for a long period, as an integral part of the ethical plurality in which Western Society and other societies live.

In what follows we aim at developing a new ethics based on the latest scientific knowledge, which we call belonging ethics; but before we do that, it is convenient to insist that the rationalism off Rawls and Sen has had very important positive results. Rawls' theory of justice is a fundamental critique that points out inconsistencies in the Western societies' values; and presents an interesting proposal to guide the discussion of issues related to justice. Thus, despite its rationalism, Rawls' theory is an abstract exercise that illuminates the space of justice within Western countries. Sen has several contributions. The first one is his formal SCT which we have discuss before, and which, despite its limitations, remains an important analytical tool. The second contribution is his capability theory and his discussion of global poverty which has provided a new way to look at problems of justice which has been highly influential. In the practical world, Sen has already achieved more than could have been expected.

Not only do different cultures have different ethics, but a culture can contain various ethics, as is the case with the Western Society. The ethical pluralism of the West keeps alive many distinct ethics, as well as the thinking of the proponents of ethical relativism. And the question then is: What defines the social order in a society that is ethically plural (like most large societies are)? There are three possible answers. The first answer is that only what the democratic majority decides is done. This answer, however, has the problem that it would make social equilibrium very unstable and explosive. Because the voluble dictatorship of the majority plus one, does not guarantee the continuity required by social life; the latest, among other things, requires educating the individual about what is to be considered an ethically acceptable behavior. The second answer is the route taken by Rawls and Sen. That there is consensus on certain common minimum principles, and that they guide consensual social action; the problem with this route is that it is not possible to demonstrate that: 1) there is such proposed consensus; 2) our individual reason has access to know such consensual principles; and 3) that the indi-

vidual is a moral individual who is willing to guide his conduct by the consensus that his reason discovers. In fact, reality reveals that the consensus that everyone in society is supposed to have found changes from author to author. And the individual behavior is quite complex and cannot be explained only by an ethical individual. The third answer is given by the ethics of belonging.

The ethics of belonging argues that: 1) Every society requires a social ethic, which can be a set of different ethics, as in the case of the West. 2) In Western societies (in the context of an already given historical institutional arrangement, which defines life in the diverse institutions: government agencies, churches, universities, schools in general, social clubs, NGOs, families and so on) there is an alive discussion of the set of formal ethics (along with the arguments of ethical relativism) among the members of the society, which slowly and marginally introduces changes to the historical institutional arrangement. 3) Even though ethics are diverse among themselves, they all have in common that they promote individual behavior that favors the social order. 4) In the ethical discussion between views that may be different, proposals are made and certain agreements of what to do politically are reached (in a democratic society most agreements are established amongst the representatives elected by the popular vote, whose re-election depends on their decisions reflecting what the majority wants). And these agreements are concreted in a specific legal institutional settlement. (5) The legal institutional settlement is what defines justice; and imparting it is one of the State's duties (which includes interpreting the written law). But the implementation of justice is just one of several elements that explains the social order. 6) Social order rests on a delicate balance between diverse elements: the historical institutional arrangement, different social ethics, individual ethical conduct, individuals' interests, and the State's implementation of justice. 7) Once the individual has been differentiated based on his rights, the relationship of the individual's rights to the society is the fundamental issue in the establishment of the social order. And this relationship implies a delicate balance between: The institutions of the State, the markets, and a very complex institutional arrangement. 8) The individual acts as a political human, an economic human, and an ethical responsible human. 9) There is a complicated interaction between ethical principles and interests, that defines both social and individual action. 10) This delicate balance that defines social order, can be broken eventually; and when it happens, it

may take a long time for the society to achieve another new stable equilibrium. 11) But ultimately evolutionary survival requires that the social order exist, even if it is imperfect and always changing. 12) Belonging guides humans towards social order; but there are always belonging failures which can happened at four levels: a) At the level of the society at large. This type of social failures does not happen often; but if they occur, they become true threats for the established social order. b) At the level of the interaction between a subset of micro-networks that constitute the society. That usually produce riots and social unrest, which resolution usually happens through social change. c) At the level of the micro-networks educating the individual, especially the family whether unicellular or extended. This usually produce insecure individuals which may developed into aggressive and antisocial behavior. d) at the level of interaction between societies that may produce power threats or actual violence and diplomacy. 13) when the integrative belonging system fails, violence through the power system may be used in any one of the four a-d levels mentioned before.

Throughout the previously described process, Veblen's vison of an institution, which we have adopted and which we have already discussed, is very important. An institution is the sum of a conceptual system and its corresponding institutional arrangement. What defines a society is its institutions. Institutions are the historical memory of society, and they give it its homeostatic character. The narratives give meaning, consistency, and stability to the social order; and they are the counterpart of historical surviving institutions. These collective narratives, together with actual lessons in real behavior, are the ethical education given to the individual. For example, in the West, in most cases, as opposed to other traditional societies, part of the education to the individual is to teach him to respect and tolerate ethical plurality. Without institutions, as well as without ethical individuals, it is not possible to explain the stability of the social order. A large part of social stability is provided by the community's own history, reflected in its institutions. So the social order is determined on the basis of three acting social forces: 1) An ethical individual; 2) A complex institutional arrangement, that corresponds to a conceptual system, which reflects the historical trajectory of the society in question; and, 3) The decisions and agreements that are made in the current political and economic systems (which may or may not, depending on society in question, rely on individual actions and decisions that reflect selfishness and individual interests).

The institutional arrangement is a historical outcome, that has its parallel in a conceptual system that already contains a social ethics. Such social ethics is taught to the individual both through concepts and through actions. The individual's ethics guides his actions, and it is one of the important clues for establishing social order. The individual's learning of what is ethically socially acceptable comes initially from his interaction with his mother or care giver; and later, from his relations with other individuals, and institutions, that reflect the conceptual system of the society. Without institutions, the social order is unexplainable. It is the institutions, and not the individual interest, nor the individual rational ethical principles, that provide stability to the social order; and these institutions, are a clear consequence of the need for social belonging of the human being.

Belonging ethics inherits from the anthropological cultural ethical relativism the historical and social evidence: that different cultures have different social ethics. But points out, that these distinct social ethics have in common that they are consistent with the general evolutionary principles of survival, which guarantee the existence of the social order. Individual ethical behavior is a necessity to be able to establish social order in expanded communities. Belonging ethics departs from ethical relativism, which is unable to explain and promote the social order, as it establishes general principles that derive from our evolutionary heritage. And it also avoids the absolute universal principles of ethical essentialism, which cannot explain cultural ethical diversity. There are general evolutionary principles of survival common to all cultures; but social belonging, although evolutionarily indispensable, is expressed in different cultures through different conceptual systems and institutional arrangements. The evolutionary need for belonging indicates that each culture, or social group, requires a common ethical conceptual system of reference, and its corresponding institutional arrangement, that guarantees the ethical conduct of most individuals, so that, social order can be established within each of these societies. This explains the historical success of essentialism versus relativism. For the former provides a solution to the social order, while the latter does not. But reason, neurobiological speaking, is delimited by our emotional relationship with the external world; so that it does not have access to universal ethical principles such as essentialism presupposes. While general evolutionary principles are common to all cultures, and they establish the need for a common social ethic for

each social group, the specific way in which these ethical principles of behavior are established, depends on the specific historical development of each culture. So, it is impossible to arrive to common universal truths about what is ethical or what is the just. Distinct societies are built based upon different conceptual systems and institutional arrangements. Cultural ethical diversity explains why ethical relativism exits; while the need to explain social order, explains the triumph of essentialism. Belonging ethics explains both: cultural ethical diversity and social order.

Belonging ethics rejects the essentialist thesis that humans are ethical beings prone to making universal goodness. Human relations developed from our evolutionary and neurobiological reality of groups delimited by limbic and conceptual belonging. The notion of a universal ethic does not correspond to the scientific evolutionary reality of the formation of human social groups. But, at the same time, it is rejected that humans are beings dominated by their passions, and their individual instinct for aggression, as well as the notion that everything is relative in social relations. Human existence is defined by the development of belonging to the external world, which modulates individual aggression, and orients it to social coexistence in groups delimited by such belonging. In this way, social order is indispensable for human survival. Social order is established because of the limbic and conceptual membership that amalgamates the specific social group in question.

The individual learns to behave socially ethically, and to be non-aggressive, from the mother and other social members; but this behavior is restricted to the community to which the corresponding conceptual system relates. While aggression within a community that shares a conceptual system is rare, and it is usually consequence of failures of social or family belonging. Aggression between communities belonging to distinct conceptual systems is common.

Belonging is the source of an "ethics" of conduct based on the three ways of belonging: 1) The evolutionary need of infant's survival; 2) The specific conceptual social belonging developed by each culture; and 3) The evolutionary need to survive in the biological and material environment. As for the first, the neural development of the baby requires the love and teachings of the mother or caregiver, and this is true for all cultures, because it is necessary to ensure the survival of the species. But the way in which this evolutionary requirement of belonging is satisfied varies culturally. As for the second, evolution-imposed conditions of survival

require individual life to be developed in social groups; but the way in which such coexistence occurs also varies from culture to culture. As for third, evolution imposes a harmonious development relationship with the material and biological universe; but the degree of such harmony, and the way in which it occurs is also culturally dependent. Belonging guides our individual and social behavior, and it is a valid source of reflection on "ethics"; but understanding by "ethics" not those conducts based on following absolute universal principles common to all historical cultures and all times but conducts that revalidate our evolutionary need for belonging in all the three ways. Ethics, based on belonging, establishes evolutionary preconditions to what can be defined as the right thing to do.

We must distinguish between two different characteristics of any ethic, the first is an explanation of how we are, the second is an idealistic proposal of how we should be. Essentialist ethics are idealistic proposals that, given their rationalism, merge the two steps mentioned above into one; so that the ideal that is proposed is in fact a consequence of the assumed essence of human beings. Belonging ethics is not an essentialist ethic, and therefore, it clearly distinguishes the study of how we are, from the idealistic proposal of how we should be. Belonging ethics help us understand that the proposals of the different essentialist ethics about the true human essence cannot be supported scientifically. Belonging ethics, based on scientific knowledge, describe who we are in evolutionary terms, and serves to narrow the parameters on which discussion should take place about what's is ethical and what's is not. But, as for the ideological component, belonging ethics have nothing specific to add. Ideology and faith are subjects of beliefs, that cannot be discussed, or questioned, scientifically. The ideological discussion of how we should be surely will continue.

Belonging gives us obligations to our close beings, to society, and in general to the existential universe. The satisfaction of the three ways of belonging is required for proper brain development. And belonging is key to the stability and emotional development we need for our proper psychological development. Violations of belonging are destructive both individually and socially. Belonging failures may have severe consequences that range from inadequate baby brain development to aggressive criminal behavior that threatens the tranquility and stability of social life.

Belonging guides us into a positive emotional relationship with the outside, on which our proper psychobiological development depends. The development of belonging reduces our stress, and gives us all kinds of physical benefits, that are necessary both to prevent diseases, and

for normal brain development. Belonging generates internal peace, and the emotional balance necessary for a proper psychobiological development. Violations of our ethical evolutionary obligations of belonging alter us and cause internal physiological damage (for example: stress is raised, cortisol soars, and body cells are damaged). In all societies, evolutionary survival implies a social ethic that promotes belonging. The care of babies has been a concern of all societies, the relationship of the individual with the social group has certainly been essential for social survival, and proper belonging with the existential universe is needed for life preservation. In all societies, belonging implies taking care of other human beings, animals, and the biological and material universe around us; it orients us to a positive emotional relationship with them. In primary magic, both the sacrifice of animals and human beings is sometimes allowed; but it is a ritual sacrifice, whose purpose is to strengthen the vital cosmogony energy bond of the universe. In some religions, inappropriate behaviors were penalized with death, and in some societies they still are. But individual sacrifice is for the purpose of maintaining the social order. Individual conduct that goes against social order was always criminalized, in current Western societies the punishment ranges from prison to the death penalty. But what is important to note is that, in all these cases individual sacrifice is made based on maintaining social and existential belonging. It is necessary to distinguish the sacrifice of a human being, an animal, or nature, to strengthen universal belonging; to the sacrifice related to belonging failures. In the first case, the sacrifice seeks to foster both social and existential belonging; in the second, it attempts against them.

To specify what are the failures of belonging, it is helpful to recall the role of aggression in establishing social order. From an evolutionary point of view, aggression establishes social order in small groups; in which the law of the strongest imposes the social order necessary for the limbic belonging to be able to guarantee reproduction. Note the fundamental evolutionary relationship between aggression and limbic belonging. The physical strength of the leader is used to establish the social order necessary for the proper development of belonging. Aggression as a social organizer must be distinguished from aggression as a destructor of social order. Imagine a group where no one is stronger; there would be no social order in here, and reproduction would be impossible. In enlarged human communities, aggression can no longer be an adequate social organizer; and it is replaced by conceptual belonging. The mother teaches the child

to unlearn aggression. The social order depends on individuals not being aggressive to each other. In a sense, the role of the strongest male in the small group is replaced by the State, which also guarantees reproduction. That is why all societies penalize the sort of individual aggression that destroys social order. This already gives us an evolutionary ethical guide of great relevance: it is important in societies to distinguish those activities that are carried out to strengthen belonging; from those that constitute failures of belonging. Slavery in Rome, for example, was accepted and considered necessary for the preservation of the social order. The follies of Caligula and Tiberius were not socially accepted and constituted a failure of belonging. It is not possible to make comparative universal ethical judgments between different societies. For example, it is not possible to assert that slavery is universally and ethically inadequate from the point of view of belonging (we will explore this point more in later paragraphs); but it is possible to identify belonging flaws in each culture, and these are ethically inadequate from the point of view of belonging How far the above takes us from the point of view of providing moral guidance for human conduct? I would argue that substantially far. Many of the socially destructive behaviors are due to failures of belonging, which can be identified, and action to remedy them can be taken, both by society and the individuals. Cicero sacrificed his life fighting against the absolute power of the Roman emperor, because he understood that a failure of belonging was going to occur; and he was right, as later the inappropriate conduct of Tiberius, Caligula and Nero have shown.

A specific society does not have to make universal ethical judgments to identify those activities that constitute a belonging failure. Generally speaking: any form of abuse, aggression, or destruction, towards other human beings, animals, or the existential universe, that is not indispensable to sustain belonging, is a belonging failure. Take as examples: the systematic rape and murder of young women in Juarez city; the rape of indigenous people by elements of the Mexican army; or the abduction, vexation, and sometimes murder of kidnapped individuals; all of these are clearly belonging failures that can be identified without the need for absolute universal judgments. But identifying a belonging failure does not mean that it will be resolved. It is necessary to remember that belonging is a potential evolutionary connection, but that it does not necessarily occur. It is required to make an explicit effort to be able to develop belonging properly; and not to do so, generate the type of belonging failures that we have been pointing out.

How severe can belonging failures be? As we have already seen, at the individual level they can become so devastating that they may impede proper brain development or may interrupt an individual's life. At the level of the community, they can also become very serious, examples are the tens of thousands of deaths annually in Mexico because of criminal activity, the killing of Jews by Hitler, or the atomic bombs after second world war. In terms of existential belonging, the indiscriminate human predatory behavior has led to the disappearance of many valuable species, and a significant degrading in the quality of the global environment (including the climate) has taken place. Evolution endowed us with the capabilities of survival, and gave us, both basic survival instincts that guide us in the freedom of individuality, and the instinct of belonging that gives us a potential genetic and biological connection with the external world. But survival is not guaranteed, the evolutionary process involves the struggle to survive. Life itself is a battle to connect properly with the outside. The ethics of belonging, once we understand it, can guide us in many decisions, but whether we make the right decisions or not is up to us.

For belonging ethics, the discussion of ideals must be frank and open, and it must meet two conditions: the first is, that they do not contradict our empirical-biological-evolutionary reality; and the second is, that they can truly be implemented in practice. Belonging ethics may become a relevant guide to human conduct within a community. One of the urgent tasks is to seriously develop a global community.

With Belonging Ethics, ethical dilemmas can be evaluated under a different perspective. Once we understand: 1) That there are not scientific bases to held universal truths. 2) That the social order cannot be established only as consequence of individual selfish actions. And 3) That the social order requires an individual that fulfill his duties. Several ethical implications follow. The first one, is that human rights are neither universal nor inalienable.

The survival of the group, from an evolutionary perspective, has priority over individual survival. Therefore, if needed for its survival the social group has the ethical right to sacrifice the individual. This explains at once human sacrifices in primary societies, as well as why enlisting in the army to go to war is obligatory in Western societies. But there is an ethical belonging lesson in here: societies do not have the right to sacrifice individual lives unless it is needed for their survival. The argument is simple, a society is composed of individuals, therefore

sacrificing them with no purpose put at risk its survival. The second one, is that human rights are not only insufficient, but inadequate, to foster a proper global institutional arrangement. Belonging ethics makes it clear that there are distinct possibilities for the conceptual systems of different societies to evolve; thus, a true global institutional arrangement must start by recognizing the validity of diverse conceptual views and different institutional ways to live. The longer we delay recognizing this point, the less likely is that we can succeed at establishing the most needed proper global institutional arrangement. The third one, is that science can help us to understand where we come from, and who we are; but where do we want to go depends upon our ideals. Therefore, the discussion as to the distinct ideals proposed by different ethics will continue. As to the best ideal, belonging ethics has nothing to say, except that there is no way to define it through rationality, therefore the best ideal is the one which the participants of the society decide in congruence with their own cultural history. The fourth one, is that it is not possible to make universal ethical judgments but given a specific conceptual system and its corresponding institutional arrangement it is possible to identify specific belonging failures. The fifth one, is that a society has the right to penalize those individual activities that attempt against the established social order. The sixth one, is that the right of individual freedom is a particular characteristic of the Western Society. The seventh one, is that given the right of individual freedom, it is possible to use belonging ethics to solve some specific Western's ethical dilemmas; but such solutions are only adequate for the Western Society. In what follows we will explore four examples that apply belonging ethics to the Western Society.

Example A: The Ethics of Individual Life. From the point of view of the Ethics of Belonging. Society has the right to penalize those individual actions that are failures of belonging – that is that threaten the social order. Assisted dying, suicide, assisted suicide and abortion in principle do not violate the social order of the Western Society. So, the Ethics of Belonging underpin the solution that would result from Smith's ethics (using it without reference to divine moral law). In a society that has already differentiated the individual based on his rights, and which underpins his social order on individual freedom as the Western one does, the exercise of that freedom does not undermine the social order and should be permitted. However, this response must be limited, since the obligations of the individual to society have an evolutionary priority

to individual rights; then, the answer derived from Smith's ethics, even though it is correct from the point of view of the Ethics of Belonging, is only relatively correct. For suppose that suicide becomes popular among young people in a community, as this would threaten communal survival, the community would have the right to classify the action as malevolent and to ban it. As for capital punishment, in terms of the Ethics of Belonging, remember that society has the right to sacrifice the individual when necessary for the survival of the society. Capital punishment should be applied for individual actions that most blatantly contradict the social order – the basic objective of society. So, applying capital punishment is an ethical obligation of society only in cases where the individual activity threatens the fundamental roots of the social order.

Example B. The Ethics of War and Terrorism. From the point of view of the Ethics of Belonging, war and terrorism can only be resolved through strengthening the ties of the global community; because only as a result of a common conceptual system and an institutional arrangement, it is possible to truly penalize aggression as a social disorganizer. As we have already pointed out any progress in this direction is welcome.

Example C. The Ethics of Individual Freedom. It seems clear that in contemporary Western societies neither slavery, nor forced labor, nor sexual human trafficking, is required today to preserve the social order. So, from the point of view of the ethics of belonging, society does not have the right to limit individual freedom, and therefore it must be allowed. However, activities that damage others must be sanctioned. In particular, the aggression of some individuals to others in any extended community is a social disorganizer. Slavery, forced labor, and sexual human trafficking, for the economic benefit of a few individuals is a form of social aggression that must be banned and punished. Indeed, today, most contemporary Western ethical proposals promote the respect for individual freedom. Although there is no truly serious effort at the international in this direction. Which is due to the weakness of the global Institutional arrangement.

Example D. The Ethics of Social Inequalities and Poverty. In terms of the Ethics of Belonging, those inequalities that threaten the proper functioning of the social order constitute a failure of belonging, and society must eliminate them. Extreme inequality and poverty, fosters not only social insecurity, but also deters economic progress. Extreme Inequality and poverty as a failure of belonging, is generally easily

identifiable, and combating it is an ethical obligation of society. Extreme internationally inequality and poverty are clearly a failure of belonging, poor countries are and have been the preferred refuge of terrorists and criminals, are favorite paradises of sexual abusers, and are the quintessential providers of human beings who will be trafficked internationally. The international problem, as we mentioned above, is that given the lack of a common conceptual system there is not a proper global institutional arrangement capable to combat extreme inequality and poverty.

Scientifically neither justice, nor ethics, can be deduce from general principles. We have presented CI's belonging justice-ethics, which is a consequence of the evolutionary survival need of belonging. Individuals cannot survive by themselves, human beings from the beginning depend upon the survival of the group. Thus, the group survival is ethically more fundamental than individual survival. But. since the group is constituted of individuals, group survival requires that individual is not sacrifice unless it is required for group survival. In most societies ethics and justice relate to define individual's duties, it is only in the Western Society that rights are differentiated; but even in here they are secondary to the group's ethical rights. Ethical relativism has rightly pointed out the differences between the conceptual systems of distinct societies and through historical time. Despite this essentialism triumphed, because it was able to explain social order, which is a fact of live in all the societies. But its triumph came at the cost of not been able to explain cultural diversity. Belonging can explain both social order and cultural diversity. Contemporary social order implies[265]: 1) the coercive power of the State to implement the rule of law; 2) the judicial system interpretation of the written law (which reflects the notion of justice that derives from the social belonging ethics); and 3) an individual ethical conduct (which is guided by the social ethics). The social order in democracies is irrational, insofar as it reflects the will of the majority; but it is always guided by an institutional arrangement and its corresponding conceptual system that provides a social vision of what is ethical and just, and what is not. The individual is guided in his conduct not only by his individual interests, but also by the principles of ethical conduct that were instilled in him since childhood, and that give him a sense of belonging to the group and to the existential world, which is fundamental both for individual's and group's survival. Belonging ethics throws new light into classical ethical dilemmas.

[265] See Obregon, *Social Order*., op. cit.

BELONGING JUSTICE-ETHICS AND THE IMPOSSIBILITY RESULTS

The impossibility results do not go way due to interpersonal-comparisons and/or deliberations based upon a subset of common ethical-justice values that provide partial orderings that generate partial agreements. Scientifically the rational presumption of the existence of such subset of common ethical-justice values is not justified; and even if it existed, the assumption that people would be willing to live always up to their values is scientifically incorrect. Many social choices reflect disagreements in values and in interests. Most large traditional societies were already culturally very diverse and what maintain them together was not ethical behavior obeying common values, but an enveloped institutional arrangement that reflected disagreements in values and in interest of the diverse groups constituting the society. It is the strength of the envelope institutional arrangement and its corresponding conceptual system that allows social choices to be taken. Social choices in general are not the consequence of aggregating individuals' preferences + values, they are due to complex institutional arrangements which in any case do reflect in Western societies individual choices expressed through many channels like voting for political representatives, institutions of the civil society, free press, free web, public manifestations, balance of power and so forth. Informed participative deliberative democracy as the one assumed by SCT is only but an element of the complex institutional arrangement that creates social choices. And in fact, social choices created only by SCT through informed participative deliberative democracy may not generate a stable social order and may easily collapse into an illegitimate authoritarian society or an illegitimate populist authoritarian society.

Belonging justice-ethics is an important element of the integrative system and therefore contributes to social order, but it is just one of the elements that influence social choices that are taken in the three social systems the economic, the integrative and the power. And, as we said, not all conflict can be managed through social choices in the integrative system. Let us just take two examples. Global poverty, as mentioned international aid to poor countries is only 0.2% of global GDP while social expenditures in a typical Western country over GDP is between 20% to 25%. Clearly poverty can be managed in the integrative system within the Western societies and not at the global level. Now the success in the western countries nor only reflects an ingroup integrative system but also the growing political power of the middle class. Globally neither of the

two conditions are satisfied. Take a second example the Russian-Ukraine war, the conflict is being solved through violence in the power system based on divergent interest, any appeal to common values is as unmeaningful as it would be in the Jew-Palestinian conflict. While ethical values are relevant, interests are also critical in any social choice.

BELONGING JUSTICE-ETHICS AND DEMOCRACY

To some extent Rawls was in the right direction, and Sen in the wrong one in relation to Sen's argument of the required global impartiality. Institutional arrangements and conceptual values happen to be historically nationally bounded by the nation's interest versus other nations. Within the Western nations human rights are generally respected, but Western nations in general do not respect the human rights of the citizens of the world living out of the Western's frontiers. Democracy is based in the ethics of human rights which has a rational origin, and therefore ethical considerations related to human rights are a strong inspiration in the writing of Western law. But globally there is not a written accepted law and not a seriously accepted judicial system.

In democracies social choice do have a serious influence of the ethics of human rights. Although as Rawls has shown with many inconsistencies; therefore, democratic social choices in addition to values reflect interests; and as said before, they are not a direct consequence of aggregating individuals' preference + values; instead, they relate to complex institutional arrangements.

At the global level, social choices do not have a serious influence of the ethics of human rights, and therefore global social choices, between nations, are mostly based upon interests.

IMPOSSIBILITY RESULTS IN THE JUDICIAL SYSTEM

As a final note, the impossibility results have been extended to judicial decisions. For an example, suppose a three-judge court must decide on the following propositions: Obligation (O): the defendant was contractually obliged not to do action X; Action (A): the defendant did action X;

Liability (L) = the defendant is liable for breach of contract. An assume the judges hold the judgments shown in the example below. As it can be seen in Table 7.1 the doctrinal paradox arises.

TABLE 7.1 THE DOCTRINAL PARADOX: EXAMPLE

Judge	O	A	L
1	true	true	true
2	false	true	false
3	true	false	false
Majority	true	true	false

The example comes from Kornshauer and Sager[266].

List and Pettit[267] probed that there exists no judgment aggregation rule satisfying universal domain, collective rationality, anonymity, and systematicity. Where collective rationality means that the collective judgment set is consistent and complete, like ordering; and systematicity is the counterpart of irrelevant alternatives. Pauly and van Hess proof that the impossibility persists if anonymity is weakened to non-dictatorship[268]. For further discussion see annex part one.

There is no doubt that deliberative well-informed process can be more fruitful in small groups, but even in judges' or juror's decisions institutions, conceptual values, and interests, are very influential, that is what explains the political struggle between republicans and democrats in the US to see which one can appoint more judges into the supreme court, and all though the judicial system.

[266] Kornhauser, L. A. and L. G. Sager, 1986, "Unpacking the Court," *Yale Law Journal,* 96: 82–117. Similar examples were discovered by Poisson in 1837 and Vacca in 1921, as documented in Elster 2013. Elster, J., 2013, "Excessive Ambitions (II)," *Capitalism and Society,* 8, Issue 1, Article 1.

[267] List, C. and P. Pettit, 2002, "Aggregating Sets of Judgments: An Impossibility Result," *Economics and Philosophy,* 18(1): 89–110.

[268] Pauly, M. and M. van Hees, 2006, "Logical Constraints on Judgment Aggregation," *Journal of Philosophical Logic,* 35: 569–585.2006. For other generalizations see Dietrich 2006 and Monguin 2008. Dietrich, F., 2006, "Judgment Aggregation: (Im)Possibility Theorems," *Journal of Economic Theory,* 126: 286–298. Mongin, P., 2008, "Factoring Out the Impossibility of Logical Aggregation," *Journal of Economic Theory,* 141: 100–113.

CONCLUSION

Social choices can be seen either as the sum of aggregating individuals' preferences + values or as the consequence of complex institutional arrangements and their corresponding conceptual systems. In the first alternative, the impossibility results can only be removed away by assuming a rational subset of common ethical values that allows for partial orderings; the rational assumption includes that people choices (actions) do reflect their values. Such a rational assumption does not have scientific basis. The second alternative sees the aggregation of individuals' preferences + values only as one element in the complex process of reaching a social choice; a process that is more relevant in contemporary Western societies than in others, but which anyway is only an element in the social choice. Particularly in democracies, in which the individuals' rights have been differentiated, it is necessary to encourage individual participation into social choices; but aggregation of individual preferences + values is only one of the ways to do it, there are others such as: a representative democracy, civil society institutions, social manifestations, free press, free web and so on. In summary, while ethical and justice considerations are of the utmost relevance in any society, justice cannot be obtained just by aggregating the individuals preferences + values of well-informed individuals that have had enough deliberation. Justice implies a very complex institutional process which includes ethical considerations that not only involve the society's conceptual system but also its institutional arrangement. Justice in addition to values always includes interests' considerations.

Now we are able to answer the questions raised in the beginning of this chapter. Can justice or ethics provide the basis to get away from the impossibility results? The answer is that they cannot, because humans do not have access to universal values, and nothing guarantees that partial orderings will be found. This answer has important pragmatic implications. It explains why international aid to the poor is so low. And asserts that ethical benevolence will not be the way in the future to solve the global problem of poverty. Globally we need to appeal to the interests of the developed nations, as to the economic benefits that they will receive by providing help to develop the poor nations of the world. How do justice and ethics relate to SCT? Ethics and justice are part of the whole institutional arrangement and conceptual system of the society. SCT cannot be used to obtain fair and just solutions. Justice do not depend upon the today's "will of the people" (which in addition we know cannot be

found). Are justice and ethics required to maintain social order? Yes, they are. The individual ethical behavior is an important component of social order. But ethics is not an essential ethics, but a set of diverse ethics consequence of distinct cultural backgrounds of the small groups that constitute the large society. And justice reflects agreements based nor only in values but also on interests. How do justice and ethics relate to social change and social conflict? Social conflict and social change define the historical path of a society which to survive needs to reestablish all the time social order. Ethical discussion and pragmatic agreements reflected in the written law and in the social customs are critical elements of the reestablishment of a common integrative system to obtain social order. What is the relation between justice and ethics and a democratic political regime? Individual ethical behavior, a written law and social customs provide an important element in the institutional stability required for a democratic political regime to operate. Are there impossibility results in the judicial decisions? Yes, they are. What do they mean? They mean that even the judges' decisions are influenced by the institutional arrangement and the conceptual system that includes values and interests of diverse groups. What is ethics? We have answer with the belonging ethics explained in this chapter, which is a non-essential ethics that represents a set of ethics corresponding to the cultural background of the diverse small groups that constitute the society. What is justice? Written justice is a social agreement based upon values and interests that defines a common accepted way of life. The interpretation of the law always involves ethical considerations based upon the set of ethics mentioned before. How does justice differ from ethics? Justice implies a social agreement, while ethics only implies value considerations. Justice always involves interests while ethics does not.

CONCLUSION

In the first chapter, in the first section, we have traced what we have learned in each historical attempt of welfare economics to show that markets optimize the social economic welfare. We have discussed why welfare economics failed to reach its goal. And we have introduced Arrow's impossibility theorem and have shown how it leads to Sen's defense of a positive SCT. We have left for chapter two a broader view of Sen's economics. In the second section, we have briefly discussed what both the failure of welfare economics and the development of SCT mean in the context of information theory, game theory, and neoinstitutionalism in economics (NIE). We have shown how these other schools proved the existence of multi-equilibriums, that may exhibit underemployment and/or underdevelopment. Some of which may be Pareto optimal, but many of which are not, like for example the Nash equilibriums. We have concluded in this second section that, since any economic equilibrium critically depends upon an institutional arrangement, social choices also are critically dependent on such institutional arrangement.

Chapter two presented Sen's economics. This chapter has argued that it should be understood as the interaction of three layers: 1) An axiomatic, scientific level, in which Sen shows the axiomatic conditions to develop a positive SCT; 2) a philosophical level, in which Sen establishes his rational philosophical preconceptions; 3) a pragmatic level, in which Sen argues that something must be done now to solve the world's pressing problems of injustice. Sen, it is shown, has been highly successful in changing the way in which the world sees key injustice problems such as: poverty, well-being distribution, comparative deprivation, and gender inequality. Sen, it is shown, has changed the way the world understands economic development, because even if Sen's specific capabilities are rejected as universal values, it is still true that whatever capabilities a society wishes to give to the individuals, they are a key parameter of development which is distinct from economic growth. It is argued that Sen's success, however, is not a consequence of his axiomatic SCT – which remains only useful for specific cases - but of his philosophical preconceptions and of his pragmatism, that offer new lenses with which to look at the social

world. It has been discussed that, despite Sen's important contributions in economics, there are two key important limitations in his theory that should be mentioned. Sen's SCT builds social choices departing from an individualistic approach, that requires common value judgments (even if only partial) that can only come from one of two sources: 1) universal external truths, to which humans neurobiologically do not have access, or 2) common institutions. The first limitation of Sen's economics is to leave out institutions from social choices. And once institutions enter (replacing the universal ethical truths) it becomes clear that solutions through the integrative systems are not always possible, in many cases there may just not be partial common values that allow the partial orderings required by Sen's positive SCT. The ingroup-outgroup distinction, which has been proven scientifically, becomes relevant; and on many occasions the power system enters the determination of between groups' social choices. Understanding therefore the institutional arrangement's role in social choices becomes critical. Sen's economics' *homo economicus*' second limitation is that by substituting the *homo economicus* in the markets by the ethical-integral human being, it ends up being unable to explain economic growth. Yet economic growth is critical to solve some of the injustice problems with which Sen is concerned. Global poverty will not be solved by the virtue of the benevolence of the rich countries (consequence of appealing to their ethical values), but by recognizing that promoting the economic growth of the poor countries is also beneficial for the rich ones (appealing to rich countries' interests).

Chapter three has discussed institutionalism and social choices. It has shown that neoinstitutionalism in economics (NIE) has made it possible to reconcile individualism with institutions, and it has shown that both are a crucial for social choices in the history of the West. In addition, it has brought our attention to the importance of institutional design, which however is not easy to do, and must consider the informal institutions of each society. NIE clearly establishes that social choices can never be just the result of aggregating individual preferences + values (as SCT proposes), because those preferences and values already occur in a historical institutional context which is crucial in the determination of social choices. North's work, it is argued, has the enormous importance of having revived the discussion of the importance of institutions in a historical economic analysis, which allows us to understand a) that institutions have a decisive influence on individual decisions and on social choices, and b) that to understand the economic development of a country and

the possibilities of accelerating it through institutional design, it is necessary to carefully study its own historical institutional arrangement. However, North's proposals are dominated by an element of idealism. For him, economic development implies, in one way or another, imitating the West. For North the individual is the central axis of historical change; progress in history occurs when the society modifies the property regime to provide the individual with better incentives for innovative behavior. We have shown in this chapter that North's idealism generates a permanent bias in his analysis. To see history from the ideal of the Western individual, prevents him from appreciating the importance of communal traditions in the economic development of the West, and particularly their definitive role in Asia's development. The lesson from the successful Asian countries' fast economic growth is not that temporarily efficient institutions can be implanted in constant search of the Western ideal, but that there are other possible development paths using the strengths of the institutional history of each of these communities to compete globally with the West. North's work is more successful in understanding the failure of Russia, and the relative failure of Latin America, than it is in understanding the reason for Asia's success. To understand why these Asian countries have been so successful, a novel understanding of institutionalism is required, different from NIE, that we have called comprehensive institutionalism (CI). The discussion of the characteristics of CI and its relationship with Veblen's proposals is the topic that has been presented in chapter four.

Chapter four has introduced comprehensive institutionalism (CI). CI is a comprehensive scientific exercise based on the following premises: 1) It distinguishes between science and ideology, and it is based only on scientific knowledge; 2) it integrates the scientific knowledge in diverse social sciences, such as economics, sociology, cognitive psychology, social psychology, linguistics, and anthropology, with other sciences such as evolutionary biology and neurobiology; 3) it contemplates the social relation between the individual and the society considering all the scientific previously mentioned disciplines; and 4) it includes institutions, without denying the relevance of individualism in Western history. CI provides a comprehensive view of the relationship between the individual and the society, placing the economic relation in the perspective of what we know in other disciplines. CI takes from neurobiology four critical lessons. 1) humans were evolutionarily designed, from the very beginning, to be social beings. 2) humans were evolutionarily made to belong to their sur-

roundings, they have three evolutionary belonging ways: to those near to them, to a social group, and to the biological and physical universe surrounding them. 3) The existence of individuals is an evolutionary fact, required to maximize the survival chances of life itself. Therefore, there must be always some degree of conflict between the individual and the society – a conflict that is resolved through social institutions (including a sophisticated language), that is why social choices always involve institutions. 4) We were originally designed to belong to small groups, which became larger due to technological advancements and the development of a sophisticated language. Therefore, there is always potential conflict between the diverse small groups that belong to a large society, which may or not be resolved through institutional social choices. And between large societies, with a weak common institutional arrangement, the relation is based on interests, and the power system may often be invoked in the resolution of conflicts. CI has explained why the four most critical socio-economic choices, i.e., economic growth, economic stability, well-being distribution, and poverty elimination, are taken by institutional leaders. CI brings a new perspective to the relationship between the problems of economic growth and poverty. CI argues that the problem of global poverty will not be resolved appealing to the benevolence of the rich countries, but instead to their economic interests and the gains that they will obtain by introducing a new Marshall-like plan to develop the poor countries. CI also presents a new perspective about the world's most pressing problems and argues that their solution requires a much stronger global institutional arrangement. The second section of this fourth chapter has presented CI's economic growth theory, which explains the success of the Asian growth model based on the strength of these Asian countries' traditional institutions.

Part two has explored the politics and ethics of social choice. Chapter five has discussed how political choices happen in democratic and non-democratic societies, and how they can be improved. The first section has discussed the technical problems inherent in aggregating individual votes, i.e., the voting paradox, and it highlights the importance of an institutional democracy. The second section has shown how political choices are taken in diverse societies, and the particularities of the liberal democratic societies. This chapter arrived at the conclusion that there is no theoretical way to be able to aggregate individual votes; and that any aggregation depends upon a given institutional arrangement. It warns however, that institutions cannot replace electoral processes or other ways

to collect public opinion. It defends that in a society that has diversified historically the individuals based on their rights, as the Western societies, the best-known way for adequate social choices is the liberal democratic process. But we point out that in traditional societies, which have not historically diversified the individuals based on their rights, it cannot be shown that the liberal democratic process is superior to other traditional ways to define social choices. This chapter shows that the institutional arrangement in a liberal democracy, precludes the leaders from abusing of their power through a delicate institutional balance that not only includes political competition and strong judicial and legislative branches of power, but also many other social government and non-government institutions. The chapter distinguished in general between legitimate and illegitimate political regimes. It argues that a political regime is legitimate if the following two conditions are satisfied: I) The individuals of that society have adequate belonging and emotional stability; II) individuals participate freely in their political system according to their conceptual system of reference and the process of social mentalizing (or social decision making) is done (even if only by a minority) in the benefit of the society in question. A legitimate democratic regime is a particular case of the previous definition. As for deliberative democracy, it is argued that it is relevant for discussion in small groups and may be an important factor in creating public awareness in large groups. But it has critical limitations that must be understood. This chapter proposes that SCT, as it exists today, only explores social choices as they relate to aggregating individuals' preferences + values, and consequently it underestimates the role of power and conflict in social choices; it does not analyze properly the social choices in traditional societies; and it does not explore sufficiently the requirements that the institutional arrangement of a democratic liberal democracy must have. Moreover, this chapter has shown that SCT is not adequate to understand the requirements of social choices at the world's level. The world, seen as a whole, is a non-democratic society, therefore socio-political choices are not taken by aggregating individuals' preferences + values, nor could they be taken that way because there are not mechanisms to do so. For social choices related to the world, seen as one culture, individual democratic participation is out of the question. The answer lies in a stronger international institutional arrangement, and an increasing participation of the international civil society.

Chapter six has shown that social conflict is built-in in our evolutionary roots. Conflict in societies is due to four reasons: the need of individ-

uality of the genetic pool in order to maximize life survival chances; the competition for scarce resources; the fact that that we were evolutionarily designed to belong to small groups; and the representational nature of reality in the human mind. Belonging failures occur in any of the three belonging ways. Love belonging failures create insecure personalities and all sort of psychological and sociological pathologies. Social belonging failures may be rooted in any one of the three social systems. Economic conflicts are due to scarce resources and to changing economic interests and values, due to technological innovations. Integrative system conflicts are due to the representational reality of the human mind, and they are political, ideological, religious, ethical, legal, racial, sexual, and so on. Power conflicts may be consequence of preventing deviant behavior within an in-group or society, or of confronting out-groups or other societies. Existential belonging failures may generate individual anxiety, and in addition may create unsustainable relations of humans with the rest of the universe – as the global climate crisis has shown. Social conflict is required for societies to change and adapt to changing circumstances. However, social order is also a survival requirement. What gives continuity to the societies from one social order to the following one (incorporating the social changes brought about by social conflict) is the institutional arrangement and its corresponding conceptual system. Informed deliberative participatory democracy, even if it was possible to avoid the impossibility results, is not up to the task to be able to manage social conflict into an adequate social change that leads to a new acceptable social order. It is not today's "will of the people" (even if it could be found – which as seen in the previous chapter is not possible -) what maintains the required transitional social order – historical institutions are required. Representative democracy is a very complex system sustained by a sophisticated institutional arrangement, in which for key decisions experts can be heard, and in which drastic changes are usually avoided by built-in rules of decision that foster social stability and order. This chapter shows that democracies do not necessarily manage conflict better than traditional societies. It is not true that democracies go less to war than authoritarian states, and it is not true either that they manage better internal conflicts. In this chapter it is shown that the number of global deaths in wars per one hundred thousand people has not been reduced with the increase in democracies in the world. Moreover, democracies do have more homicides per one hundred thousand people than autocracies. These statistics may include some underreporting in autocracies, but in general they are explained by the fact

that autocracies are also for the most part legitimate systems. But what is relevant is not to compare autocracies with democracies. Because once a society has differentiated the individuals in terms of their rights, there is no way back, under these circumstances, as Winston Churchill argued, with all its defects, democracy is the best (and only) available option. But the interesting result is that the homicide rate goes down significantly in liberal democracies when we compare them with electoral democracies, which shows that the way out for a democracy to manage internal conflict more properly is strengthening its institutional arrangement. Democracy must be understood for what it is: a second-best option that has, as we have been arguing, many limitations. Not only technically the "will of the people" cannot be found (and we must conform ourselves with second-best options); but in addition, democracy to operate properly requires a sophisticated institutional arrangement. Thus, while it is crucial that representative electorally chosen officials listen to the people[269], it is also important that they take critical sophisticated decisions based on experts' opinions. A representative democracy is a very complex system that should operate as such and cannot be replaced by informed deliberative participatory democracy. The latter, while important, should be restricted to very well-defined projects for small communities. The world, seen as one culture, is a not a democracy, but that, this chapter argues, does not mean that it cannot manage social conflict adequately. It does not need to become a democracy, but it must be a legitimate political system. But to become one, a much stronger institutional arrangement is required. Strengthening the global institutional arrangement is the critical social choice of our times, and it will have to be taken by global leaders under the influence of the institutions of the global civil society.

Chapter seven has discussed justice, ethics, and social choice. The central questions addressed in this chapter are: Can justice or ethics provide the basis to get away from the impossibility results? How do justice and ethics relate to SCT? Are justice and ethics required to maintain social order? How do justice and ethics relate to social change and social conflict? What is the relation between justice and ethics and a democratic political regime? Are there impossibility results in the judicial decisions? And if so, what do they mean? What is justice? What is ethics? How does justice differ from ethics? And the answers found are as follows. It is argued that justice or ethics cannot provide the basis to get away from the impossibility results, because humans do not have access to univer-

269 Allowing public manifestations, civil society institutions, public opinion surveys, and so on.

sal values, and therefore nothing guarantees that partial orderings will be found. This answer has important pragmatic implications. It explains why international aid to the poor is so low. And it asserts that appealing to ethical benevolence will not be the way in the future to solve the global problem of poverty. Globally we need to appeal to the interests of the developed nations, emphasizing the economic benefits that they will receive by providing help to develop the poor nations of the world. This chapter asserts that ethics and justice are part of the whole institutional arrangement and conceptual system of the society. Thus, SCT cannot be used to obtain fair and just solutions. Justice does not depend upon today's "will of the people" (which in addition we know cannot be found). Justice and ethics are required to maintain social order. The individual ethical behavior is an important component of social order. But the individuals' ethics is not an essential ethics, but a set of diverse ethics consequence of distinct cultural backgrounds of the small groups that constitute the larger society. And justice relates to agreements based not only on values but also on interests. Social conflict and social change define the historical path of a society which, to survive, needs to reestablish at all times social order. Ethical discussion and pragmatic agreements, reflected in the written law and in the social customs, are critical elements of the reestablishment of a common integrative system required to obtain social order. Individual ethical behavior, a written law and social customs are important elements in the institutional stability required for a democratic political regime to operate. Even judges' and jurors' decisions, are influenced by the institutional arrangement and the conceptual system that includes values and interests of diverse groups. The chapter answers the question of what ethics is with the notion of belonging ethics, which is a non-essential ethics that represents a set of ethics corresponding to the cultural background of the diverse small groups that constitute the society. And it answers the question of what justice is with the notion of belonging justice, which is a social agreement based upon values and interests that define a commonly accepted way of life. The interpretation of the law always involves ethical considerations based upon the set of ethics mentioned before. Justice implies a social agreement, while ethics only implies value considerations. Justice always involves interests, while ethics does not. In Western democracies social choices do have a serious influence derived from the ethics of human rights. Although - as Rawls has shown - with many inconsistencies; therefore, democratic social choices, in addition to values. always involve interests. At the global level, social choices do not have a

serious influence of the ethics of human rights, and therefore global social choices, between nations, are mostly based upon interests.

In summary: social choices always involve institutions. The world today is confronted with many fundamental problems which will require social choices that cannot be based only on aggregating individuals' preferences + values; the design of the international institutional arrangement will be critical for the solutions for global poverty, underdevelopment, financial stability, global health issues, global climate, international crime, and global peace.

ANNEX: THE ANALYTICS OF SOCIAL CHOICE

PART 1: INCOMPATIBILITY RESULTS

History

How to construct a social decision (social choice) out of individual decisions has been a concerned of social thinkers for a very long time. In 1785 Condorcet advocated pair-wise majority voting[270]. He introduced his jury theorem that states that if each individual juror has a better than random chance to appreciate whether a defendant is guilty, then the correctness of the judgment increases with the number of jurors[271]. This result is reversed if the probability is less than half[272]. Moreover, it is inly valid if jurors reveal their true judgment, otherwise the result is undefined and is given by game theory[273]. He also introduced the Condorcet's paradox, which shows that majority preference might be irrational (i.e., intransitive) even when individual preferences are rational (i.e., transitive). Already Borda a co-national contemporary of Condorcet showed that under other constrained voting methods like the Borda count the Condorcet paradox can be avoided. However, the Borda count has its

[270] Essay on the application of majority voting Condorcet, Nicolas de, 1785, *Essay sur l'Application de l'Analyse à la Probabilité des Décisions Rendue à la Pluralité des Voix,* Paris.

[271] Grofman, Owen, and Feld 1983. Landemore 2013. Goodin and Spikerman 2018. Grofman, B., G. Owen, and S. L. Feld, 1983, "Thirteen theorems in search of the truth," *Theory and Decision,* 15: 261–278. Landemore, H., 2013, *Democratic Reason: Politics, Collective Intelligence, and the Rule of the Many,* Princeton: Princeton University Press. Goodin, R. E. and K. Spiekermann, 2018, *An Epistemic Theory of Democracy,* Oxford: Oxford University Press

[272] Berend, D. and J. Paroush, 1998, "When is Condorcet's Jury Theorem valid?" *Social Choice and Welfare,* 15: 481–488.

[273] Austin-Smith and Banks 1996. Feddersen and Pesendorfer 1998. Austen-Smith, D. and J. S. Banks, 1996, "Information Aggregation, Rationality, and the Condorcet Jury Theorem," *American Political Science Review,* 90: 34–45. Feddersen, T. J. and W. Pesendorfer, 1998, "Convicting the Innocent," *American Political Science Review,* 92: 23–35.

own problems because it violates the independence of irrelevant alternatives and therefore is subject to strategic voting and/or strategic agenda, the result then depends upon game theory and is not well defined. See below independence of irrelevant alternatives.

Three arguments have been built in defense of majority voting: 1) the epistemic defense of Condorcet, based in his jury theorem, already explained above -which implies that more people meant getting closer to the truth; 2) a utilitarian argument; and 3) procedural argument.

As for Condorcet's epistemic defense, based in his jury theorem, as we have argued has very unrealistic assumptions and under realistic ones it does not hold[274]. Moreover, if the voters do not reveal their judgments truthfully game-theoretic work shows that many results are possible[275].

The utilitarian argument is based in Rae-Taylor theorem. Suppose that any individual i gets utility 1 when the social decision matches his/her vote or preference and 0 when it does not then the Rae-Taylor theorem proves that majority rule maximizes each individual's expected utility.

Rae-Taylor theorem: if each individual has an equal prior probability of preferring each of the two alternatives, majority rule maximizes each individual's expected utility[276].

Brighhouse and Fleurbaey show however that when stakes vary among voters the majority rule does not maximizes total utility, and a weighted majority rule is required[277]. This of course complicates the argument because two reasons. First, the weighted function requires individual's information as to the stakes of each one. And in the absence of this information a social guess implying an externa social judgment may be required, example the problem of poverty.

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[274] Dietrich 2008, Dietrich and List 2004, Dietrich and Spiekermann 2013. Dietrich, F., 2008, "The premises of Condorcet's jury theorem are not simultaneously justified," *Episteme,* 5: 56–73. Dietrich, F. and C. List, 2004, "A Model of Jury Decisions Where All Jurors Have the Same Evidence," *Synthese,* 142: 175–202. Dietrich, F. and K. Spiekermann, 2013, "Epistemic Democracy with Defensible Premises," *Economics and Philosophy,* 29(1): 87–120.

[275] Austin, Smith and Banks 1996., op. cit. Feddersen and Pesendorfer 1998., op. cit.

[276] Mueller 2003., op. cit.

[277] Brighouse, H., and M. Fleurbaey, 2010, "Democracy and Proportionality," *Journal of Political Philosophy,* 18: 137–155.

The procedural argument was presented by May's theorem[278]:
May's theorem: An aggregation rule satisfies universal domain, anonymity, neutrality, and positive responsiveness if and only if it is a majority rule.

Where, universal domain copes with pluralism in the inputs, anonymity to treat all voters equally, neutrality to treat all alternatives equally and positive responsiveness requires the social decision to be a positive function of the way people vote.

May's theorem has been generalized[279]; but in any case, aggregating individual preferences turn out to be impossible as Arrow have shown.

ARROW' S THEOREM

Given a set of N individuals, N = {1,2…, n}, where n≥2. Let X = {x1, x2..., xz} be a set of social alternatives. Each individual i N has a personal preference ordering Pi which is a complete and transitive binary relation on X. Pi may take three values Pi=PS if the individual has a strict preference, Pi= PW if the individual has a weak preference and Pi=PI if the individual is indifferent. The combination of preference orderings across the individuals is called a profile P = (P1, P2… Pn). A preference aggregation rule PA is then a function PA= F (P).

Then for any x1, x2 X, x1PAWx2 means that x1 is socially weakly preferred to x2; x1PASx2 means x1is socially strictly preferred to x2 (which means that xi is socially weakly preferred to x2, and x2 is not socially weakly preferred to x1), and x1PAIx2 that x1 is socially indifferent to x2.

Arrow suggested that the following five very reasonable criteria must be satisfied:

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[278] May 1952 May, K. O., 1952, "A set of independent, necessary and sufficient conditions for simple majority decision," *Econometrica,* 20: 680–684.

[279] Fey 2004, Cantillon and Rangel 2002, Goodin and List 2006. Fey, M., 2004, "May's theorem with an infinite population," *Social Choice and Welfare,* 23: 275–293. Cantillon, E. and A. Rangel, 2002, "A graphical analysis of some basic results in social choice," *Social Choice and Welfare,* 19: 587–611. Goodin, R. E. and C. List, 2006, "A Conditional Defense of Plurality Rule: Generalizing May's Theorem in a Restricted Informational Environment," *American Journal of Political Science,* 50: 940–949. Fey, M., 2004, "May's theorem with an infinite population," *Social Choice and Welfare,* 23: 275–293.

1) Universal domain: the domain of F is the set of all logically possible profiles of complete and transitive individual preference orderings.
2) Ordering: For any profile P in the domain of F, the social preference relation PA is complete and transitive.
3) Weak Pareto Principle: For any profile P in the domain of F, if for all i N, x1PSix2 then x1PASx2.
4) Independence of irrelevant alternatives: For any two profiles P and P* in the domain of F and any two x1, x2 X, if for all i N, Pi's rankings between x1 and x2 coincides with Pi*'s ranking between x1 and x2, then x1PWx2 if and only if x1P*Wx2.
5) Non-dictatorship: There does not exist an individual i N such that, for all P in the domain of F and all x1, x2 X, x1PSix2 implies x1PASx2.

Arrow's theorem states that if | X | > 2, there exists no preference aggregation rule satisfying the five criteria reviewed above.

RELAXING ARROW'S CRITERIA

One way out of Arrow's theorem is not to satisfy one of the five criteria as discuss below:

Universal Domain.

Logical pluralism includes the possibility of non-align preferences in some of the participants, the following example, given by Arrow, illustrates the issue. Assume n=3 and z=3.

Then: P= (P1, P2, P3)

P1= x1px2, x2px3, x3px1

P2= x2px3, x3px1, x2px1

P3= x3px1, x1px2, x3px2

p indicates preferred to

The result will be that PA has two counts for 1p2, two counts for 2p3, and two counts for 3p1 which implies that there is no transitive (rational) solution.

The problem arises because of the non-align preferences of P3. Assume 1= capitalism, 2= socialism, and 3= communism, Individual 3 prefers communis to capitalism, capitalism to socialism, communism to socialism which is viable and forms part of the universal domain.

What is the way out? Black[280] showed that if each profile Pi can be aligned from "left" to "right" on some cognitive or ideological dimension (that is if we exclude cases like P3 in the example) then it can be linearly ordered and shows *single-peakedness;* and then PA has a solution. Moreover, pairwise majority voting satisfies the rest of Arrows conditions[281]. Other domain restrictions have the same implications, such as: *single-cavedness[282], separability into two groups[283],* and *latin-squarelessness[284]*. Sen showed that all these conditions imply a weaker condition that also works *triple-wise-value-restrictions[285]*. From the point of view of real policy issues restricted domains may work in specific circumstances, but a more interesting real question is whether domain can be restricted through deliberation between the individuals focusing them on a shared cognitive or ideological dimension so that they agree in a restricted domain, a *meta-agreement[286]*. Experimental results have been positive[287]; but further work is needed, and some criticisms have been raised[288].

Ordering.

To relaxed ordering Gibbard defined what he called quasi-transitivity. P is quasi-transitive if PS is transitive, but PI is not. And he called PA

[280] Black 1948., op. cit.

[281] Arrow 1951/1963., op. cit.

[282] Inada 1964. Inada, K.-I., 1964, "A Note on the Simple Majority Decision Rule," *Econometrica,* 32: 525–531.

[283] Ibid.

[284] Ward, B., 1965, "Majority Voting and Alternative Forms of Public Enterprises," *The Public Economy of Urban Communities,* J. Margolis (ed.), Baltimore: Johns Hopkins Press.

[285] Sen, A. K., 1966, "A Possibility Theorem on Majority Decisions," *Econometrica,* 34: 491–499.

[286] Miller 1992, Knight and Jhonson 1994, Dryzek and List 2003. Miller, D., 1992, "Deliberative Democracy and Social Choice," *Political Studies,* 40 (special issue): 54–67. Knight, J., and J. Johnson, 1994, "Aggregation and Deliberation: On the Possibility of Democratic Legitimacy," *Political Theory,* 22: 277–296. Dryzek, J. and C. List, 2003, "Social Choice Theory and Deliberative Democracy: A Reconciliation," *British Journal of Political Science,* 33: 1–28.

[287] List, Luskin, Fishkin, and Mclean 2013. Rafie Rad and Roy 2021. List, C., R. C. Luskin, J. S. Fishkin, and I. McLean, 2013, "Deliberation, Single-Peakedness, and the Possibility of Meaningful Democracy: Evidence from Deliberative Polls," *Journal of Politics,* 75: 80–95. Rafiee Rad, S. and O. Roy, 2021, "Deliberation, Single-Peakedness, and Coherent Aggregation," *American Political Science Review,* first online 22 February 2021. doi:10.1017/S0003055420001045

[288] Ottonelli, V. and D. Porello, 2013, "On the elusive notion of meta-agreement," *Politics, Philosophy and Economics,* 12: 68–92.

oligarchic if there is a subset M⊆N (the oligarchs) such that a) for all i M, x1PSix2, then xiPSAx2, and b) for some i M, x1PSix2, then x1PAWx2.

Gibbard probed that even with quasi-transitivity possibilities of aggregation are still very limited[289]. Therefore, relaxing ordering does not seem to be a promissory route.

Gibbard Theorem states that if |X| > 2 there exists no preference aggregation rule satisfying universal domain, quasi-transitivity and completeness of social preferences, the weak Pareto principle, independence of irrelevant alternatives, and non-oligarchy.

The Weak Pareto Principle

It is not a promissory route because it would imply that unanimous individual preferences should not be respected. An exception might be spurious unanimous decisions, that is those based in misconceived evaluations of the individuals participating, so that hew information may break the unanimous individual preferences[290].

Sen introduced what has been called the liberal paradox. He suggested that a liberal society must respect certain minimum human rights. Minimal liberalism suggests that at least two individuals in the society such have a decisiveness between two alternatives each that cannot be override by society. And then he showed that there is then conflict between the weak Pareto principle and minimal liberalism.

Sen defines minimal liberalism: There are at least two distinct individuals i, j N who are each decisive on at least one pair of alternatives; i.e., there is at least one pair of distinct alternatives x1, x2 X such that for every profile Pi, x1PSx2 implies x1PASx2, and x2PSix1 implies x2PASx1, and at least one pair of distinct alternatives x1*,x2* X such that, for every profile Pi, x1*PSjx2 implies x1*PASx2, and x2*PSjx1 and x2PSjx1 implies x2PASx2.

Sen's theorem[291]: There exists no preference aggregation rule satisfying universal domain, acyclicity of social preferences, the weak Pareto principle, and minimal liberalism.

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[289] Gibbard, A., 1969, "Social Choice and the Arrow Conditions," Unpublished manuscript. [Gibbard 1969 available online (pdf)]

[290] Monguin 1997, Gilboa, Samet and Schmeidler 2004. Mongin, P., 1997, "Spurious Unanimity and the Pareto Principle," Paper presented at the Conference on Utilitarianism, New Orleans, March 1997. [Mongin 1997 available online (pdf)]. Gilboa, I., D. Samet, and D. Schmeidler, 2004, "Utilitarian Aggregation of Beliefs and Tastes," *Journal of Political Economy,* 112: 932–938.

[291] Sen, A. K., 1970, "The Impossibility of a Paretian Liberal," *Journal of Political Economy,* 78: 152–157.

The way out of the liberal paradox is restricting the domain of suitable preferences[292]. Other authors, however, have challenged whether Sen's formalization of individual rights is adequate[293].

Independence of irrelevant alternatives

Relaxing the independence of irrelevant alternatives is the most common way to obtain possible preferences aggregation rules. In any voting process in which the voters are asked full or partial preference orderings they may be strategic voting and/or strategic agenda setting that violates the independence of irrelevant alternatives. The solution may then involve game theory and is not well defined. In any case the violation of independence of irrelevant alternatives is not a suitable method to construct a suitable social welfare function.

Analyzing the possibility to obtain a single rule, Gibbert and Satterhwhite developed the following theorem

Gibbert and Satterhwhite theorem: There exists no social rule satisfying universal domain, non-dictatorship, the range constraint, resoluteness, and strategy proofness.

Where, the range constraint implies a range of at least three alternatives, resoluteness implies that the social choice produces always a unique winning alternative, and strategy proofness that no individual can manipulate the chosen social choice – that means changing the social choice by submitting false preferences. It can be shown that the Borda count fails to comply with strategy proofness[294].

Interpersonal Comparisons

It has been shown by Sen and others that a way out is to replace rankings of alternatives in an order of preference by enriched informational basis

[292] Blau 1975, Craven 1982, Gigliotti 1986, Sen 1983. Blau, J. H., 1975, "Liberal Values and Independence," *Review of Economic Studies,* 42: 395–401. Craven, J., 1982, "Liberalism and Individual Preferences," *Theory and Decision,* 14: 351–360. Gigliotti, G. A., 1986, "Comment on Craven," *Theory and Decision,* 21: 89–95. Sen, A. K., 1983, "Liberty and social choice," *Journal of Philosophy,* 80: 5–28. Blau, J. H., 1975, "Liberal Values and Independence," *Review of Economic Studies,* 42: 395–401.

[293] Gaertner, Pattanaik, and Suzumura 1992, Dowding and van Hees 2003. Gaertner, W., P. K. Pattanaik, and K. Suzumura, 1992, "Individual Rights Revisited," *Economica,* 59: 161–177. Dowding, K. and M. van Hees, 2003, "The Construction of Rights," *American Political Science Review,* 97: 281–293.

[294] Stanford Encyclopedia of Philosophy.

to sustain the social choice. There are two possible ways to do this: 1) allowing interpersonal comparisons which will be discussed in this section, and 2) to replace preference orderings with qualitative rankings of the alternatives that will be discussed in the next section.

To allow for interpersonal comparisons let us define a welfare function as $\mathbf{W}i = F(Pi)$ which in addition to Pi contains more information. Then the social welfare profile is $PA\mathbf{W} = (\mathbf{W}i, \mathbf{W}2,\ldots,\mathbf{W}n)$. Then, the Social Welfare Functional $SWFL = F\ (PA\mathbf{W})$, where F assigns a Social Welfare Function (SWF) in some domain of admissible profiles. F technically depends upon the assumptions used about measurability and interpersonal comparability of welfare. F then obeys some meaningful statements that provide additional information. The transformation of F is made without losing information as to the preferential ordering of each individual but adds additional information that allows interpersonal comparability. The original PA is re-scaled without loss of information, but the shifting constants used for diverse individuals may be distinct thus allowing for interpersonal comparison. F may be an ordinal or a cardinal transformation. From this perspective Arrow's theorem only holds because of the lack of interpersonal comparability.

Several criteria could be used to create F, examples are classical utilitarianism, the head-count method of poverty measurement (assuming certain minimum poverty is a social goal), the Rawls' difference principle or Sen's capabilities. F then enters the realm of social judgments.

F has been used in many applications such as distributive justice[295], improvements in standard cost-benefit analysis[296], health problems[297], variable population choice problems[298], and many other problems. SWFL has been generalized to multiple individual welfare functions capturing multiple opinions about each individual's welfare function[299], or multiple

[295] Roemer, J. E., 1996, *Theories of Distributive Justice,* Cambridge, MA: Harvard University Press

[296] Adler 2012, 2019. Adler, M. D., 2011, *Well-Being and Fair Distribution: Beyond Cost-Benefit Analysis,* Oxford: Oxford University Press. ---, 2019, *Measuring Social Welfare: An Introduction,* Oxford: Oxford University Press.

[297] Tsuchiya, A., and J. Miyamoto, 2019, "Social Choice in Health and Health Care," *The Handbook of Rational and Social Choice,* P. Anand, P. Pattanaik, and C. Puppe (eds.), Oxford: Oxford University Press, pp. 524–540

[298] Blackorby, C., W. Bossert, and D. Donaldson 2005, *Population Issues in Social Choice Theory, Welfare Economics, and Ethics,* Cambridge: Cambridge University Press

[299] Roberts 1995, Ooghe and Lauwers 2005. Roberts, K.W.S., 1995, "Valued Opinions or Opinionated Values: The Double Aggregation Problem," *Choice, Welfare and Development: A*

dimensions of welfare[300]. These models in addition to consider measurability and interpersonal comparisons include inter-opinions and interpersonal comparability; however, to obtain meaningful results comparability must be restricted to non-explosive criteria which is not a serious limitation but must be considered[301]. Multidimensional SWFL have been used for inequality measurements[302]. And in the philosophy of biology one -dimensional and multidimensional SWFL has been used to discuss group fitness as a function of individual fitness indicators[303].

Qualitative Rankings

Changing rankings for qualitative rankings, it is possible to get away from Arrow's impossibility theorem. One problem is that qualitative rankings may fail to satisfy strategy proofness, but the main concern is that grades do not have the same common meaning for all voters which renders the exercise unmeaningful[304].

Judgment Aggregation

A collective decision may have one of three objectives: 1)The ranking of several alternatives in an order of social preference – like in Arrow; 2) the

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Festschrift in Honour of Amartya Sen, K. Basu, P. K. Pattanaik, and K. Suzumura (eds.), Oxford: Oxford University Press, pp. 141–165. Ooghe, E. and L. Lauwers, 2005, "Non-dictatorial extensive social choice," *Economic Theory,* 25: 721–743.

[300] List, C., 2004, "Multidimensional Welfare Aggregation," *Public Choice,* 119: 119–142.

[301] Any dynamic function between two individuals comparing each other may explode. But this is not necessarily a concern in many real-life cases.

[302] Weymark, J., 2006, "The Normative Approach to the Measurement of Multidimensional Inequality," *Inequality and Economic Integration,* F. Farina, and E. Savaglio (eds.), London: Routledge, pp. 303–328.

[303] Okasha 2009, Bossert, Qi and Weymark 2013. Okasha, S., 2009, "Individuals, groups, fitness and utility: multi-level selection meets social choice theory," *Biology and Philosophy,* 24: 561–584. Bossert, W., C. X. Qi, and J. A. Weymark, 2013, "Extensive social choice and the measurement of group fitness in biological hierarchies," *Biology and Philosophy,* 28: 75–98

[304] Morreau 2016. Op. cit.

choice of a single winning alternative like in Gibbert and Satterhwhite; or 3) the aggregation of individual sets of judgments on multiple, logically connected propositions into collective sets of judgments.

For an example of 3), suppose a three-judge court must decide on the following propositions: Obligation (O): the defendant was contractually obliged not to do action X; Action (A): the defendant did action X; Liability (L) = the defendant is liable for breach of contract. An assume the judges hold the judgments shown in the example below. The example comes from Kornshauer and Sager[305]. As it can be seen the doctrinal paradox arises.

THE DOCTRINAL PARADOX: EXAMPLE

Judge	O	A	L
1	true	true	true
2	false	true	false
3	true	false	false
Majority	true	true	false

The following proposition is true for the general case: Proposition wise majority voting may generate inconsistent collective judgments if and only if the set of propositions (and their negations) on which judgments are to be made has a minimal inconsistent subset of three or more propositions[306].

List and Pettit[307] probed that there exists no judgment aggregation rule satisfying universal domain, collective rationality, anonymity, and systematicity. Where collective rationality means that the collective judgment set is consistent and complete, like ordering; and systematicity is the counterpart of irrelevant alternatives. Pauly and van Hess proof that

[305] 1986., op. cit. Similar examples were discovered by Poisson in 1837 and Vacca in 1921, as documented in Elster 2013., op.cit.

[306] Dietrich and List 2007. Nehring and Pope 2007. Dietrich, F., and C. List, 2007, "Judgment aggregation by quota rules: majority voting generalized," *Journal of Theoretical Politics,* 19: 391–424. Nehring, K. and C. Puppe, 2007, "The structure of strategy-proof social choice—Part I: General characterization and possibility results on median spaces," *Journal of Economic Theory,* 135: 269–305.

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the impossibility persists if anonymity is weakened to non-dictatorship[308].

In preference aggregation when there are more than three alternatives there are impossibility results, in judgment aggregation what matters is not the number of alternatives in X but the nature of the logical connections between them (the agenda). Dietrich and List probed that if X is non- simple, pair negatable and path connected, there exists no judgment aggregation rule satisfying universal domain, collective rationality, independence, unanimity preservation, and non-dictatorship[309]. This result yields Arrow's theorem as a special case of judgment aggregation[310]. There are several extensions of this result[311].

As in the Arrow case by relaxing one or several conditions to be satisfied the impossibility result goes away.

Relaxing universal domain. If the domain set is restricted to those satisfying "cohesion" conditions, the impossibility result goes away. List introduces unidimensional alignment as a "cohesion" condition[312] and Dietrich and Lis[313] showed that generalizes Sen's triple wise value restriction as a "cohesion" condition, of which Sen's becomes a particular case.

Relaxing collective rationality. Excluding conditions where there is wide disagreement produce consistent collective judgments but leaves the excluding conditions undecided. However, it has been shown that if while relaxing completeness we require collective judgment sets to be deductively closed, we face an impossibility result again[314].

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[308] Pauly, M. and M. van Hees, 2006, "Logical Constraints on Judgment Aggregation," *Journal of Philosophical Logic,* 35: 569–585. For other generalizations see Dietrich 2006, op. cit. and Monguin 2008., op. cit.

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Relaxing Systematic/independence. The cost of relaxing independence, just as in preference aggregation is the loss of strategy-proofness[315].

It has also been shown that a distinct way to get rid of the impossibility results is to abandon the binary format of judgments (yes or not, and true or false) and to assume that they take the form of subjective probabilities. Aczel and Warner have shown that a probability opinion pooling satisfies universal domain, collective coherence, zero preservation, and independence if and only if it is a linear pooling rule[316]. However, Genest and Warner have shown linear pooling does not preserve unanimously held conditional independence judgments and that if we add the preservation requirement, we get impossibility results again[317]. Madansky[318] has shown that linear pooling does not satisfy external "bayesianity, which if added as a requirement creates impossibility results. It has also been shown the Arrovian preference aggregation as a special case[319].

APPLICATIONS

In addition to the applications mentioned in the section on interpersonal comparisons above, social choice theory has had many other applications such as: preference and welfare aggregation under risk and uncertain-

rationality," *Social Choice and Welfare,* 31: 15–39. Dokow, E. and R. Holzman, 2010b, "Aggregation of binary evaluations with abstentions," *Journal of Economic Theory,* 145: 544–561

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ty[320], theories of fair division,[321] theories of matching[322],behavioral choice theory[323], empirical social choice theory[324], topological social choice theory[325], Computational social choice theory[326],collective decision making in non-human animals[327], and social epistemology[328].

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PART TWO: VOTING PARADOXES AND INCOMPATIBILITY RESULTS

The Condorcet Paradox

The Condorcet Paradox, discovered by him in the eighteenth century, can be shown as follows[329]:
Assume three persons 1, 2 and 3 with the following preferences over three alternatives x, y, and z.

1	2	3
x	y	z
y	z	x
z	x	y

In pair-wise voting and under majority rule xwy, ywz and zwx (where w denotes means wins over). The result violates transitivity, but in addition creates majority cycles in which there is not one winner.

As shown in annex one the way out of the Condorcet Paradox necessarily implies violating one of the Arrow's criteria. For example, the Borda count avoids the Condorcet's paradox, but violates the independence of irrelevant alternatives.

Results Dependence Upon the Voting Procedure

Even whenever there is a Condorcet winner, it turns out that the result may be manipulated by changing the procedure use for voting. In the example in table A2.1 which shows the preferences of 11 voters on six candidates there is a condorcet winner and it is E (it wins over all of the others in pair-wise voting)[330]. However, the winner can be changed to be any one of the other candidates just by changing the voting procedure. The procedure-dependence of voting outcomes can be shown by demostrating that different voting procedures may imply distinct outcomes.

[329] This example is from Sen, Amartya. Collective Choice and Social Welfare (p. 283). Penguin Books Ltd. Kindle edition.

[330] This example comes from Hannu Nurmi, 2022. Social choice, stable outcomes and deliberative democracy, *Control and Cybernetics vol. 51 (2022) No. 2 pages: 137-149.*

Table A2.1, and Table A2.2 define six sound democratic voting procedures, and shows that each one of the six candidates can win depending upon which voting procedure is used.

TABLE A.2.1 VOTERS PREFERENCES (11 VOTERS)

4 voters	2 voters	3 voters	2 voters
A	B	D	F
E	E	C	C
C	C	B	D
F	F	E	E
D	D	F	B
B	A	A	A

TABLE A.2.2 SIX DIFFERENT VOTING PROCEDURES AND SIX DIFFERENT WINNERS

1.- **Plurality voting- winner candidate A.** Each voter exercise one vote which is given to his/her preferred candidate. A = 4 votes, D = 3 votes, B = 2 votes, F = 2 votes. A wins.

2.- **Plurality runoff system – winner candidate D.** Elects the candidate that is majority preferred to its sole competitor in the contest between the two largest voter-getters in the plurality voting. Two major competitors are A and D, A preferrred by 4 voters, while D is preferred by 7 voters. D wins. E wins.

3.- **Copeland's rule -winner candidate E.** Elects a candidate that would defeat more of its contestants in pairwise majority comparisons (i.e. ignoring other candidates) than any other candidate. Copeland's rule is a Condorcet extension, because it always elect the Condorcet winner when one exists. The Condorcet winner is a candidate that would defeat all other candidates in pairwise majority comparisons. In pair-wise voting A loses against everybody, B loses with everybody except A, C wins gainst D and F but loses with E, D loses against E and F, E wins against everybody, F loses against E.

4.- **The Borda count -winner candidate C.** The Borda count is based on the scores given to candidates in individual preference rankings. The candidate's points given by a voter equal the number of candidates ranked lower than it by the voter in question. Summing up the points given by all voters to a given candidate constitute the latter's Borda score. The election result under the Borda count is the ranking of candidates in the order of their Borda scores. Borda scores are as follows: A= 20, B = 21, C = 38, D = 27, E = 34, F= 25. C wins

5.- **The approval voting -winner candidate (under certain assumptions) B.** It requires more information from the voters than just their preference rankings. The approval voting elects the candidate that has more approvals than any other, calls for the voters to single out those candidates they approve of. Assuming sincere voting strategies, this amounts to requiring that the voters provide a cut-point such that all candidates above the point get one approval vote from the voter, while no candidate below the

point gets any approvals from the voter in question. The approval voting gives each voter for each candidate a choice between two options: to approve the candidate or not to approve the candidate. In the profile of Table A2.1 the following – purely ad hoc – assumption is made: the group consisting of three voters approves of their three top-ranked candidates, while the remaining voters approve of only the first-ranked candidate. Scores are as follows: A = 1, B = 2, C = 1, D = 1, F = 1. B wins.

6.- **The range voting - winner candidate under certain assumptions) F.** It requires more information from the voters than just their preference ranking. the voters' assigning a score to each candidate. For each candidate the scores given by the voters are summed up and the candidate with the highest score sum is declared the winner. Normally, a range of scores is predetermined, e.g. integers in the [0, 10] interval. Let us assume, for the sake of argument, that the nine left-most voters assign scores to candidates in the same way as in the Borda count, but the two right-most voters assign ten points to their first ranked F and 0 points to the others. Scores are A = 20, B = 19, C = 30, D = 21, E = 30, F = 35. F wins.

Incompatibility Results

For the general case Arrows theorem, under very reasonable criteria, showed that it is impossible for the general case to aggregate individual choices into a social choice, see appendix one. Another two very well known impossibility theorems should be mentioned.

Theorem 1 (Gibbard, 1973, and Satterthwaite, 1975) Every universal and non-trivial resolute social choice function is either manipulable or dictatorial.

Where: 1) A social choice function is non-trivial (non-degenerate) if and only if for each candidate x, there is such a preference profile that x is chosen. And 2) A social choice function is manipulable (by individuals) if and only if there is a situation and an individual such that the latter can bring about a preferable outcome by preference misrepresentation rather than by truthful revelation of his/her preference ranking, ceteris paribus.

This theorem 1 means that it is not necessarily in the voters' best interest to act in accordance with their preference rankings over the candidates. Thus, they may hide their true preferences and game theory possibilities emerge wuth very diverse potential results.

Theorem 2. (Moulin, 1988) If there are more than three candidates and at least 25 voters, no voting rule satisfies both the Condorcet consistency and the participation condition.

Where: 1) A voting rule satisfies participation condition if a voter never loses by joining the electorate and reporting truthfully his/her preference (as opposed to abstaining), ceteris paribus. And 2) A rule satisfies Condorcet consistency if it always elects the Condorcet winner when one exists.

This theorem 2 means that it is not always in the best interest of voters to participate.

Summary

There are several impossibility theorems that show that for the general case it is not possible to aggregate individual votes to always obtain a Condorcet solution. To obtain a solution when a Condorcet solution does not exists is always psossible by violating Arrow's criteria. The problem then is that there are a multiplicity of solutions depending upon the voting procedure chosen. Moreover, even if a Condorcet solution exists, by changing the voting procedure, within a set of "democratic procedures" the result can be manipulated to chose any one wanted.

Another alternative, already discussed in Annex I, is for the deliberation procedures to change the poreferences of the participants so that the social choice become single peaked and a solution can be found *Dryzek and List (2003)*. But, there are three caveats to be considered. 1) deliberation may not end up been succesful to change the preferences; 2) deliberation may no take away the voters benefits from hiding their true preferences, not the benefits (if they exist) for no participating. Assuming deliberations to be always succesful is idealistic, 3) While delibaration does not a guarantee a succesful aggregation in small groups because of the previous two considerations, the likehood of its success serously goes down in large groups.

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