Political uses of social indicators: overview and application to sustainable development indicators¹
(DRAFT)

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1. Introduction

The importance of indicators for sustainable development has been stated as early as 1992 at the United Nations’ Conference on Environment and Development in Rio. There are references to indicators at different places in the Agenda 21 document but more especially in chapter 40, which is entirely devoted to “information for decision making”. The following sentence which is the only one in Agenda 21 where the role of indicators of sustainable development in policy making is defined is at the root of a whole sustainable development indicators industry.

“Indicators of sustainable development need to be developed to provide solid bases for decision-making at all levels and to contribute to a self-regulating sustainability of integrated environment and development system.”

Indeed, during the fifteen years elapsed since the Rio Conference and the proclamation of Agenda 21, tremendous amounts of energy, money and talent have been devoted to the building, testing and discussion of sustainable development (SD) indicators. Not just industrialized nations but also less developed one, not only national authorities but also international, regional and local ones, not only public authorities but private actors such as business and NGO indulge in what seems to have become the biggest game in town. Yet, there is a widespread feeling of deception with respect to the real use of SD indicators (SDI) in policy making. As Pinter, Hardi and Bartelmus observe:

“While sustainability indicators, indices and reporting systems gained growing popularity in both the public and private sectors, their effectiveness in influencing actual policy and practices often remained limited. The gap between the large potential but smaller influence of SDI on more mainstream adoption of sustainable policies and practices suggests there is a latent potential for indicators to play a stronger role in articulating and tracking progress towards sustainability visions in a wide range of settings”.

Parris and Kates find indicators sets universally accepted, backed by compelling theory, rigorous data collection and analysis and influential in politics. This is hardly something new but, should it be confirmed, it would pinpoint the absence of any progress in the SDI business. After their review of indicators of agricultural and rural sustainable livelihoods, Rigby et al. (2000) already concluded that:” Much of the measurement of indicators has, at the end of the day, largely resulted just in the measurement of indicators. The actual operationalization of indicators to influence or change, for instance, policy is still in infancy”.

In this paper, I want to qualify and somewhat contradict the assumption that SDI influence moderately current policy-making. This feeling is largely motivated, I argue, by a too restrictive conception of policy-making and of the nature and function of indicators. Basically, it assimilates all policy making to rational, instrumental problem-solving, failing to acknowledge the political importance of discourses, public controversies and debates on the definition and legitimization of social problems, the underlying causes and assigned responsibilities in their emergence, their possible solutions, etc. In one word, it underestimates the role of indicators as “discursive elements” (Ortega, 2005).

As far as I know, Ortega’s paper is to date the only one that fully acknowledges the discursive character of sustainability indicators. It shows convincingly that besides their “direct use” in decision making, sustainability indicators have many other uses notably in the creation and evolution of sustainability discourse, in the interaction between this sustainability discourse and others political discourses, in the struggle between institutions for power and social influence, in social learning, etc. They can also be used “as rhetorical elements in the decision-making process either as a delayed tactic or as a substitute for action, while still arguing to support the sustainability discourse”. Stepping into the breach opened by Ortega, I discuss three main conceptions of policy-making and argue that the different uses of social indicators – including sustainable development indicators – can be associated to one of them. However, while most scholars consider these policy-making models as alternative and competing accounts of the same reality, I make the hypothesis that they correspond to different stages
of the evolution of social problems in public arenas and/or to different way of dealing with them at the political institutions level.

The paper is organized as follows. First, I will summarize the three dominant conceptions of policy-making, with a special emphasis on the way they account for knowledge and therefore indicators, in the policy-making process. Secondly, I present Blumer’s and Hilgartner & Bosk’s theory of public arenas and try to establish the relation between the evolution and competition of social problems in the public arenas and the three main visions of policy-making. Then, I go back to social indicators with a short discussion of the history of the US unemployment rate as an illuminating example of the different roles indicators can play in the unfolding of social problems. Finally, I try to put all the materials together in a short discussion of the current situation of indicators for sustainable development.

2 Three conceptions of policy and policy-making

2.1 The rational-positivist model

Most complaints about the failure of indicators to influence and change policy-making, are backed by a narrow conception of policy making and of the role indicators have to play in it. For instance, the sentence in Agenda 21 quoted here above seems to assume that policy-making for sustainable development could eventually become an element of a cybernetic self-regulating process, an homeostatic system adapting itself automatically to changes in environmental variables (e.g. indicators) by enacting some feedback reaction designed to help keeping the whole system within some predetermined and stable limits. This can be considered a - quite utopian by the way- rationalist (Stone 2002) or even positivist (Fisher 2003) conception of policy-making.

More generally, the rationalist model of policy-making is a theoretical model of how public policy decisions are (or ought to be) taken. It assumes that, an objective having been stated or a problem identified, all alternative ways to reach the objective or solve the problem have to be identified and their respective costs and benefits evaluated (preferably in monetary units) and compared. The option that yields the greatest benefit/costs ratio is then necessarily selected, being the most efficient. This paradigm has inspired a huge amount of work in public economics, operational research, decision theory, social choice theory and policy science. It underlies the development and use of a whole range of applied economic models such as Computable General Equilibrium or Macro-econometric models and of various decision methods such as cost-benefit analysis or multi-attribute utility theory. Even if in the field of sustainable development where others kind of models (Boulanger et Bréchet, 2005) or of decision making tools (Munda 2003) can be considered better alternatives, these might be used in the same rationalist spirit and in the same way as the more traditional techniques referred to here above. Besides, a good part of efforts to work out methods sustainability impact assessment are based on such a conception of policy-making.

In general it is with this conception of policy-making as rational (public if not scientific problem solving, that social indicators are associated. Their function in the decision making process is understood as helping in quantifying objectives and evaluating the most effective and economically efficient way to solve the problem at hand, reach the given objective taking into account available means and resources and existing constraints. More precisely, in policy-making as rational problem solving, indicators are used for three different purposes:

- Quantifying objectives;
- Assessing alternative means to reach them (ex ante);
- Evaluating effects and impacts (ex post).

Therefore, the emphasis is on the scientific, technical and economic properties of the indicators: they are expected be specific, sensitive, reliable, cost-effective and timely.

2 The meaning given to problem-solving in the rational-positivist paradigm is very different of the meaning pragmatists such as W. James or J. Dewey gave it.
In the rational policy making setting, indicators come on stage when the objectives have been defined. This means that they are not supposed to be of much help in the objective-stating phase of the process. As a matter of fact, the rational policy making paradigm doesn’t give much attention to the way objectives are defined. Either they come more or less out of the blue, either – in the utilitarian versions of the model - they result of the maximization of a predetermined social welfare function. Ideally, the latter should be reached at because it gives a rational (Pareto optimal) solution to any public problem. To sum, what is specific in this paradigm of rational policy-making is that it erects a firewall between science and politics, between the rigorous world of facts and logic on one hand, and the subjective world of values, ideas, beliefs on the other. This is exactly what the discursive-interpretive model dismisses.

2.2 The discursive-interpretive model

To this conception of “policy without politics” based on this clear-cut separation between values and facts, authors such as Fischer, Forster, Hayer, Rein, Schön, Stone and others, building on the work of Foucault, Habermas or even Wittgenstein oppose the alternative model of “…policy making… as a constant struggle over the criteria for classification, the boundaries of categories and the definition of ideals that guide the way people behave.” Where the rational model sees policy making as mere technical problem-solving, the discursive-interpretive sees it as a struggle over the definition, explanation and interpretation of public problems. The core concepts in interpretive policy analysis are the concepts of frames, discourses, narratives, meanings, stories, etc. None of them have very clear-cut or widely accepted definition and the field of discursive-interpretive policy analysis is far from united and homogeneous but they all point to the “argumentative” turn of policy making. All in all, it seems that Schön and Rein’s analysis of “policy frames” is the most useful in the SD context.

Policy frames are structures of beliefs, perceptions and appreciations that underlie policy positions. Because real situations are complex, indeterminate and ambiguous, people select certain features and relations they consider the most relevant characteristics of the situation and create with them “stories’’ that describe and explain the situation. In Schön and Rein own terms, people facing social problems are engaged in “naming and framing” activity. But policy frames are more than cognitive structures. They have also normative implications insofar as they imply that a certain type of solution is called for. In short, a policy frame can be defined as a “normative-prescriptive story that sets out a problematic policy problem and a course of action to be taken to address the problematic situation.”

At first sight, one could think that there is no place for indicators or scientific knowledge in the discursive conception of policy-making. This is not the case. Indicators, data and facts in general while not exhibiting the ethereal character they receive in the rational-positivist model are also important component of frames or discourses. These are not purely subjective or schizophrenic constructions. Generally, they obey to what Habermas calls “communicative rationality” because people who hold them want to be able to justify in terms of truth their validity’s claim with respect to the objective world. This means that their discourses have necessarily to lean upon facts and, in complex and technological societies, on scientific knowledge. Precisely, as social constructions of the (political) reality, they constitute frameworks – quite similar to scientific theories in that respect - for collecting, analyzing and interpreting the data. Furthermore, they determine which facts are going to be considered relevant.

The most pressing and complex issues of today such as unemployment, criminality, poverty, global warming, etc… are all socially described, analyzed, interpreted in more or less different and competing frames. For instance, unemployment is framed either as an individual or as societal problem. As an individual problem it is framed in moral terms (“laziness”, “bad will”) or in terms of education (“unemployment is a problem of insufficient education”). As a systemic problem it is
considered as the consequence of technological progress, as a structural property of capitalism, as the undesirable outcome of too much social protection, etc.

Frames are at the heart of a useful distinction drawn by Schön and Rein between political *disagreements* and political *controversies*. The former are disputes that can be resolved by examination of facts. On the contrary, political controversies are immune to resolution by appeal to facts because the conflicting parties simply disagree on which set of facts is to be considered relevant or, if considering the same, on its fundamental meaning.

“…by focusing our attention on different facts and by interpreting the same facts in different ways, we have a remarkable ability, when we are embroiled in a controversy, to dismiss the evidence adduced by our antagonists.”²⁴ But “any attempt to conduct public inquiry into policy issues requires a minimally coherent, more or less consensual framework within which the results of policy issues can be evaluated and the findings of investigation can be interpreted.”²⁵ (Schön and Rein, 1994: 8).

So, what characterizes and explains political controversies is the fact that the contending parties hold different and conflicting frames. Therefore, to get out of the controversy some “reframing” is usually necessary. Policy controversies as described by Schön and Rein have some similarities with what Godard²⁶ calls “controversial universes” defined as situations where:

1. Individual representation of issues are not based on direct perceptions but mediated by a preliminary scientific and social construction;
2. All persons concerned are not present and therefore cannot express their preferences or judgments;
3. Existing scientific knowledge is itself controversial with respect to critical parts of the problem;
4. Though scientific data are inconclusive there exist technological solutions which are promoted by influential stakeholders and;
5. Some actors invoking potential irreversibility ask for immediate action despite the various uncertainties.

It is clear that while all “controversial universes” are policy controversies, not all policy controversies can be considered as “controversial universes”. But, from a sociological point of view, it could be argued that:

- individual representations of political issues are always mediated by social constructions in which science plays an important legitimating role. By the way, this is the central thesis of the discursive or interpretive model of policy. If correct, it entails that condition 1 holds for every public issue.
- In policy controversies, scientific knowledge is always more or less controversial, either because it is deemed irrelevant or because it can be diversely interpreted. So, condition 3 is also met in policy controversies.
- If one endorses a comprehensive definition of technology, including “social technologies”, condition 4 is not specific to controversial universes but occurs in every policy controversy.

However, what is specific to controversial universes as policy controversies is the presence of three additional features: the risk coming from potential irreversibility, which urges for immediate action, the fact that not all people likely to be affected by the decision can be directly involved in the debate (think about future generations for instance) and the decisive role of technologies (though not backed up by scientific evidences) in framing the problem.

2.3 The strategic model

The rational-positivist as well as the discursive-interpretive are two normative conceptions of policy insofar as they assume that the policy process and its outcome can be justified on normative basis, be it technical, instrumental rationality or “communicative rationality” (Habermas). Both presuppose the existence and the quest for a “common good” or “public interest”. However, there exists also a non-normative conception of politics as a pure competition between private conflicting interests without any necessary reference to a common good, rationality or other overarching principle. In the Marxian conception of politics, the competition opposes social classes; in the Machiavellian one it opposes elites struggling for power. For both, politics is equivalent to domination. In pluralist democratic
societies, as Schumpeter was the first to notice, the competition opposes political parties competing for the votes of their constituencies and acting as entrepreneurs: “Parties in democratic politics are analogous to entrepreneurs in a profit-seeking economy…” formulating “whatever policies they believe will gain the most votes just as entrepreneurs produce whatever products they believe will gain the most profits”.27

Table 1 summarizes the main characteristics of the three paradigms.

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<th>Table 1. Three models of policy-making.</th>
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If the ultimate criterion of decision is the actual or potential consent of a majority of electors, most policy-making in pluralist liberal democracies28 is actually the result of a bargaining process between the political parties and, in “consociational”29 (Lijphart 1984) democracies like Austria, Belgium, Netherlands and others, also between political leaders and big stakeholders (trade unions, employers, etc.).

We will not discuss this model further here. Suffice it to say that, contrary to the other two, it has little room for objective common knowledge and thus for reliable indicators. In bargaining games, truthful is useful insofar as it is remains a private, not a public good because information is used by parties to enhance their bargaining power and/or to deceive the others and it is not uncommon in such a context to manipulate public indicators in order to strengthen one’s bargaining power.
2.4 Three competing models or three moments in the evolution of social problems?

If the political science community seems to consider these three models of policy-making as alternative and competing ways to picture the same reality, it is also possible (and probably more fruitful) to think of them each as “locally true”; corresponding to particular moments and or facets in the life of social problems, as analyzed in the symbolic-interactionist perspective opened by Blumer. In a short but seminal paper, Blumer dismissed the then (1971) prevailing conception of social problem as objective facts that imposed themselves to societies. Its thesis was that “social problems are fundamentally products of a process of collective definition instead of existing independently as a set of objective social arrangements with an intrinsic makeup”. He showed quite convincingly that the social awareness and treatment of social problems were historically almost independent of their objective acuteness. For instance, racial injustice and exploitation was far greater in the 1920’s and 1930’s than in the 1970’s when the civic rights movement reached its climax; pollution and environmental destruction have been acknowledged as social problems well after their first manifestation, etc. 30

He also argued that social problems followed a five stages process, namely:

- the emergence of the problem;
- the legitimization phase;
- the mobilization of a public for action;
- the formation of an official plan of action;
- the implementation of the plan.

Legitimization of a social problem meant receiving consideration in the recognized arenas of public discussion, which are, in our society, churches, schools and universities, civic organizations, legislative chambers and the “assembly places of officialdom” and last but not least, the media of communication (mainly television nowadays). Following Blumer, a social problem has first to be recognized as a legitimate concern before becoming a valid object of discussion and controversy in the different public arenas. Problems often emerge in small professional or specialized arenas but they can only be fully legitimated in wider and unspecialized arenas such as the media of mass communication.

The legitimization and mobilization phase means succeeding in capturing the attention of the public. This is nothing but automatic because the public (in fact, the audience) have limited capacities of attention. Actually, the public’s capacity for processing information must not be much greater (and probably smaller) than the individual one and, according to Millers’s famous paper in cognitive psychology, this must not be greater than the “magic number seven plus or minus two”31. Blumer had already understood that public arenas have limited “carrying capacity” and also that there are always more problems applying for recognition in social arenas than what the public can take into account. Drawing on Blumer, Hilgartner and Bosk proposed an ecological theory of social problems. They compared social problems struggling for recognition in social arenas to living species struggling for resources in limited natural environments. As in the natural world, a kind of Darwinian selection process is at work in social arenas that filter amongst the numerous candidates, throwing out the great majority and giving place to the “fittest”. More precisely, the outcome of the selective process is as follows: a very small number of social problems are successful and become dominant in public discourse; a larger number are moderately successful and command some attention; the vast majority remain outside or at the margins of public discourse. It happens also that some of them succeed in finding a limited specialized “niche”.

Actually, and this is crucial for our discussion, the competition is not only between different problems it is also between different conceptions (definition, explanation, proposed solutions…) – or frames- of the same problem.

“The competition among social problems occurs simultaneously on two levels: first, there is competition for space between substantively different problems. Second, within each substantive area, there is a competition over definitions, that is between alternative ways of framing the problem.”32
Amongst the different social resources (money, power, influence, social networks...) that actors (or advocacy coalitions) can mobilize in the competition, two are especially important for our discussion: scientific legitimacy and evidence on the one hand, and dramatization on the other. Evidence and the support of scientific knowledge are necessary because science is one the main legitimizing principle in our societies. As Jaegher, Renn et al. (2001:180) rightly observe:

“Evidence … is not identical with truth… it is the claim of truth that social groups or special subsystems of society make based on experience, collected data, or theoretical reason. Evidence is continuously being tested for validity using shared experience, proper methods for data collection, and accepted theoretical knowledge as yardsticks… Evidence is not arbitrary in the spite of the fact that it is relative and pluralistic. Evidence in the arena concept serves as powerful social resource to convince people that the expected factual implications of one groups’ claims are in their best interest whereas the potential implications of the competing groups claims are not”. Besides, the possibility to frame a problem in a dramatic way gives it a competitive advantage over those less prone to dramatization. Moreover, in order to keep the problem high in public attention, one must try to avoid saturation caused by redundant events, symbols or figures or by the bombardment of the public with too many messages about the problem or similar ones.

Going back to the three models of policy-making, one can easily associate the legitimization and mobilization phase with the discursive-interpretive stage of the process. Things are less obvious with the formation and implementation of an action plan. These stages can be managed in a rational problem-solving way or more “politically” by way of bargaining, log-rolling, etc. Our hypothesis is that the former is more likely if a public consensus has been reached on the social problem at hand and the latter if the issue is still controversial or if social and economic interests of powerful actors are at stake. It is also possible that rational problem-solving policies degenerate in purely strategic ones if they fail in solving the problem either because they are inadequate or because the environment and/or the problem itself have changed. The unemployment problem, which will be discussed in the next sections from an indicator point of view, could provide an illustration of such an evolution. Indeed, it is obvious for many observers that employment policies of many (if not all) western countries since the mid 80 are ineffective and deceiving. Yet they continue to represent an important share of public spending. The paradox could be explained by the controversial character of the issue and also by the fact that solving it effectively would be synonymous of loss of power and of social positions for too many persons and too influent actors in our societies. This being said it is not at all evident that rational-technical policy-making leads necessarily to more effective or more efficient policies than purely strategic and political “games”. All depends on the context but what is clear however is that the former are more accountable and are to be considered better governance than the latter.

Finally, it should be stressed that discursive-interpretive, rational problem-solving and strategic components are always present, but with various intensity, all along the whole policy-making process. Different stages can only be defined in terms of temporary prevalence of one of them. On the other hand, all the actors involved are not necessarily “synchronous” in their vision of the problem at hand. Therefore, the same indicator can be used by some as a purely discursive element while others are ready to make a more rational-instrumental use of it. Such situations testify that no wide consensus have been reached on the problem.

3. Indicators and the evolution of social problems: the example of the US unemployment rate

The history of the US unemployment rate as told by Innes offers an interesting illustration of the relationship between indicators and social problems as analyzed in the sociological perspective summarized here above.

On 1975, when publishing the first edition of a book which was to be reedited in 1990 and in 2004, Innes considered the US unemployment rate as one of the most successful and influential indicator in USA.

“Its monthly oscillations receive front page attention and Presidential advisors and even Presidents fell called upon to account for its behavior – and to seek remedies for its misbehavior…The monthly
household survey to collect data is one of the most elaborate and expensive in the world and it continues despite the bad news it often provides the government that sponsors it and despite the fact that its results have often occasioned great public dispute.”

Unemployment figures were present in almost every important social arena of that time: the economists used them in predictive and analytic models, the Congress and the media used them to assess economic policy and the Administration used them for setting targets to and guide this policy. However at the origin, the unemployment rate was just conceived of as a measure of people wanting work designed to assess the remedial effort needed to relieve the problem of families without income.

The social problem of unemployment must have emerged in USA as far back as 1880 when the federal government first tried to count it at the occasion of the census. However, it is only in 1921, when President Harding called a conference of business leaders to consider the problem of unemployment that it gained effective public legitimacy.

“Accurate unemployment data was a high priority item in 1921, a focus of national attention. People in many segments of society view unemployment as serious and unlikely to solve itself. Most agreed data was essential to beginning the solution but exactly how it was used was still unclear.” As a social arena, the Congress began to play its role from 1928 by holding hearings on the issue and declaring the opportunity to work a fundamental right. Yet, one will have to wait until 1941 to obtain the first reliable figures on unemployment This means that even during the Great Depression when unemployment was at its highest, no accurate national figure was available. Some of the earlier estimates varied by no less than 2,000,000 persons. This gave the Conference the opportunity to demonstrate a precocious understanding of the role dramatization can play in the unfolding of social problems when: “…in what must be one of the lowest points in the history of social measurement, the Conference voted on the number to announce as unemployed, choosing a suitably high range of figures to attract nation’s attention.”

Such discrepancies could not be accounted for only on statistical basis. The problem was also a conceptual and political one: people just didn’t agree on the very definition of unemployment. For example, the young or the woman who were looking for their first job were left out whereas the olds who were already retired were included. Eventually, satisfying definitions of the labor force and of employment were reached at and progress in sampling techniques were accomplished enabling a satisfactory measurement of the unemployment rate. Then, in 1946, the indicator became institutionalized as part of the public policy settled in the Employment Act, which aimed at reaching “full employment”. The indicator became even more public after 1959 when unemployment figures began to be announced in press conferences. Between 1960 and 1970, the unemployment rate underwent minor modifications to account for new demands. At that time, there were two conflicting theories amongst economists about the causes of unemployment. Keynesians economists thought it was due to insufficient demand and proposed to stimulate it by tax cuts and other similar measures. On the other hand, structuralists thought that unemployment resulted form structural changes in the overall economy and in the composition of the labor force, leading to higher percentages of the difficult-to-employ. As solution, they advocated manpower policies and training programs. Each analysis had its followers and each made different demands on the data. In response to the Keynesian demands, seasonal adjustments were made on the monthly figures and in parallel, as required by the structuralists, more information on the characteristics of the unemployed were gathered and published. A few years later, under the Johnson administration, it became obvious that the methodology was inadequate for understanding employment problems in poverty areas and amongst ethnic minorities. New categories such as “hidden unemployment”, “discouraged workers” and “underemployment” began to gain currencies and the method was adapted accordingly.

At the time of writing, Innes was plainly justified in picturing the story of the unemployment rate as a real success story. However, it would be interesting to have her opinion now on the current state of the unemployment problem in USA and the faithfulness of its unemployment rate. As for most European countries, the opinion is now that unemployment figures are permanently manipulated by the successive governments whatever their ideological orientation in order to minimize what has become a
A structural problem they are incapable to solve. But is would be fair to add that unemployment as a social problem itself has changed objectively and subjectively. It is entered now in a new controversy phase making necessary a re-framing of the problem and also probably new adaptations to the concept of labor force, work, etc.

The history of the US unemployment indicator can be linked to the different phases of social problem evolution. This is what Table 2 tries to do. Of course, things are not as clear-cut as Table 2 put them: the different phases of the unfolding of social problems overlap, the periodicity is grossly oversimplified, etc. What is important is to be aware of the dynamical character of social problems and therefore of the indicators that are linked to them.

<table>
<thead>
<tr>
<th>SOCIAL PROBLEM</th>
<th>PERIOD</th>
<th>USE of the indicators</th>
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<td>Framing and dramatization in specialized arenas</td>
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<tr>
<td>Legitimization Mobilization</td>
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<td>De-legitimization – Re-legitimization (?)</td>
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<tr>
<td>Definition of a new action plan</td>
<td>1970 - …</td>
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</tr>
<tr>
<td>Degeneration?</td>
<td>……</td>
<td>Manipulation?</td>
<td>Strategic?</td>
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In sum, the US unemployment rate is an historical example of an indicator that has been successful both as discursive-interpretive tool and as a rational problem-solving element. It helped getting out of two controversies (with slight modifications in the second occurrence) and played an important role in public policies fighting unemployment and poverty. All the way long, it managed to be present in both professional and public social arenas. During the whole process it undergone minor modifications but without loosing its identity and, more important, without giving way to the critic of manipulation.

To conclude, if one looks more closely at what made the US unemployment rate a successful indicator, one can put forward the following criteria:
- framing a social problem so that a sufficient consensus can be reached about its definition, explanation and solution;
- being institutionalized in an active and effective public policy;
- remaining present in the main public arenas, especially in general media of communication.
It is important to stress that institutionalization *per se* is insufficient for characterizing an indicator as successful. This has special relevance in the sustainable development domain where it is not uncommon to see countries or intergovernmental organizations adopting plans and strategies with quantified targets and indicators sets, which are never really implemented and remain therefore totally ineffective. The indicators have been institutionalized but in a way that can be considered paying lip service to sustainable development without any real commitment to it or without a clear perception of the state of evolution of the problem in other non-official public arenas.

4. Sustainable development problems and the problem of sustainable development

Contrary to the feeling mentioned in the introduction, there have been some success stories in the uses of indicators in the social treatment of sustainable development problems, even from a narrow rational decision making perspective. Think for instance at the ozone layer issue or at the global warming one. Besides, Williams and Scott Frey have convincingly analyzed Global Warming within the public arena framework\(^39\). In both cases, indicators have played a major role first in bringing the evidences and the dramatic atmosphere necessary for gaining attention and credibility in the major public arenas, then as building blocks of operational policies with quantitative targets and evaluation criteria. In other words, indicators have been useful both as discursive and as problem-solving devices. As a result, the climate change issue, for instance, while still receiving much attention from the wider audience, is in a less controversial stage than at the origin. Something like a global (with the notable exception of the current US’s administration) consensus have been reached about its causes (especially the importance of anthropic emissions) consequences and solutions. Concerning the latter, it is more or less universally agreed upon that the most efficient and effective way to curb the process is in consuming less fossil fuels, dismissing the appeal to heavy technological solutions.

One could probably find other sustainable development problems in which indicators have help raising public awareness and defining and implementing effective policies. Likewise, there exist also sustainable development strategies in which indicators play a very significant role. Think for instance at the Millennium Development Goals\(^40\) which even if not explicitly settled in SD terms and whatever its limitations and drawbacks, constitute probably the first sustainable development strategy ever launched at the global level. Another SD strategy seemingly effective and where indicators play a very active and important role is the Baltic 21 strategy\(^41\).

However, it is undeniable that, to date there are not many –if any - SD indicators’ lists, let alone synthetic index, on which a sufficient consensus has been reached, at least at the national or international level\(^42\). This means that most institutionalized sustainable development indicators sets have been so prematurely and that they will probably remain unused and ineffective if planned in rational problem-solving policy-making perspective. On the other hand, it is likely that most of them have been adopted for strategic political reasons, as “a delaying tactic or as a substitute for action” (as Ortega already noticed) but it also possible that their promoters failed to acknowledge the still controversial nature of SD as policy frame and discourse.

In order to understand this one must keep in mind that sustainable development is more a container for a whole collection of social problems in environmental, social and economic domains than a social problem as such. Dryzek\(^43\) characterizes it as a new “main” discourse similar in that respect to other existing “main discourses” such as “industrialism” (Dryzek speaking). But there are two different ways to define the nature and role of SD as a “main” discourse or “meta-frame”; either as a re-statement of the up to now, hegemonic discourse of economic growth, trade liberalization and capitalist globalization or, on the contrary, as a competitor to it. Fisher\(^44\) (2003: 146-147) adopts the first position and analyzes the SD discourse as a re- framing of the global socio-environmental issue in order to preserve the existing consensus:

“When the environmental issues emerged in the late 1960s and early 1970s, the main focus was on the ‘limits to growth’ (..). Western countries had to learn to tame the material tendencies of industrial society. Though this debate remained a dominant feature of the environmental movement throughout the 1970s, it proved to be a non-starter for the business community…throughout this period, business leaders mainly sought to either stall or deny the environmentalists arguments, which did nothing to
offset the increasing recognition that the environment was in serious trouble and getting worse… There was no serious attempt to talk across these two frames… In response, the Brundtland Report…proposed a new concept, that of 'sustainable development'. Sustainable development, as an alternative frame, opened up new possibilities. By drawing on the discourses of both business and the environment movement, sustainable development opened the way for both groups to sit down at the same table”.

But for many others, the SD discourse stands as an alternative to the economic discourse, hegemonic since the Second World and therefore, far from closing the controversy opened by the environmental discourse, it would usher us in a new fundamental policy controversy about the very definition and conception of the common good and human well being. Is SD as a new meta-frame or “hyper-discourse”, candidate for taking the place of the old hegemonic discourse of economic growth, progress through technology and liberal globalization, etc., or is SD as a mere aggiornamento, a simple re-framing of it in order to integrate environmental issues? The question is open: the two conceptions are competing in the public arenas today and nobody knows who will eventually win the race. It is even possible that a third discourse will emerge from the confrontation and put a term to the controversy.

On the other hand, there is an intense competition inside SD, between alternative SD frames, for instance between the triple bottom line (TBL) approach, ecological modernization theory, the limits to growth approach, the four productive assets theory, the “panarchy” 45 (resilience) model, etc. I think that these different conceptions can be brought down to the more fundamental controversy between the weak and the strong conceptions of sustainability, the former making room for large substitutions between man-made and natural capital, the latter seeing very stringent limits to such substitutions 46. There is also a relation between the external and the internal controversies; advocates of SD as an alternative main discourse are more likely to adopt the strong sustainability conception while the subscribers to the conception of SD as re-framing line up with the weak sustainability conception. These two competitions have their counterpart in parallel competitions in the field of indicators: between alternative indicators of sustainable development on one hand and between SD indicators and other social indicators, on the other hand. The Gross National (or Domestic) Product being the emblematic indicator of the dominant discourse to date is naturally the privileged target of the search for alternative SD indicators.

Table 3 proposes a classification of these competing indicators following two axes: the axis “Substitute vs. Complementary” and the axis “Development - Sustainability”.

<table>
<thead>
<tr>
<th>SUBSTITUTE</th>
<th>COMPLEMENTARY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Development</strong></td>
<td></td>
</tr>
<tr>
<td>- Index of sustainable economic</td>
<td>- Gross National-Domestic Product</td>
</tr>
<tr>
<td>welfare (ISEW)</td>
<td>(GNP-GDP)</td>
</tr>
<tr>
<td>- Genuine Progress Index (GPI)</td>
<td>- Human Development Index (HDI)</td>
</tr>
<tr>
<td>- Measure of Domestic Progress</td>
<td></td>
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<tr>
<td>(MDP)</td>
<td></td>
</tr>
<tr>
<td>- Subjective Well-Being</td>
<td></td>
</tr>
<tr>
<td><strong>Sustainability</strong></td>
<td></td>
</tr>
<tr>
<td>- Ecological Footprint (EF)</td>
<td>- Genuine saving (GS)</td>
</tr>
<tr>
<td>- Total Material Requirements (TMR)</td>
<td>- Environmental Sustainability Index (ESI)</td>
</tr>
<tr>
<td>- ….</td>
<td>- ….</td>
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</tbody>
</table>

Briefly, the development axis refers to the intragenerational dimension of SD (“meetings the needs of the present…”) while the “sustainability” one refers to its intergenerational dimension. To date, as alternative indicator, the Ecological Footprint is probably the leader of the competition in the non-specialized, universal public arenas. It is also the most clearly based on a strong sustainability standpoint. At the opposite, the Genuine Saving Index is a weak sustainability index that is winning,
day after day, more and more legitimacy and support in restricted – but very influential - arenas such as academic circles and intergovernmental institutions like the World Bank and the OECD.

The leading position of the Ecological Footprint (EF) on the wider public arenas can be explained by its superiority in dramatization. However it could be argued that this is achieved at the expense of its accuracy and reliability in providing evidence. The reverse could be said from the Genuine Saving (GS) index: it is very weak in dramatization but has probably more to offer in terms of evidence making. Anyway, it is most likely that the competition between the weak and the strong sustainability frames will concentrate on a struggle between these two indicators in the public arenas.

However, none of them can seriously claim to be a real substitute to the GDP because they only address the sustainability side of SD, leaving aside the development one. Admittedly, GDP has succeeded from years while dealing only with the development side, and with absolutely no concern whatsoever for the sustainability issue. But it is unlikely that a “sustainability only” discourse could outrank a “development only” one because it would mean that people give more weight to the future than to the present. The best that can be expected in that matter is an equal concern for current and future generations.

In the “Substitute-Development” cell we put indicators that claim to take the place of currently dominant development (or well-being) indicators. Indeed, the ISEW, GPI and MPD\(^7\), while being based on the GDP, pretend to be better estimates of socio-economic development than the GDP itself. It is not the case of the HDI whose aim is only to complement it. However, one could contest the claim of the various “improved GDPs” to constitute real alternatives for it. Indeed, they share the same fundamental assumptions and as a matter of fact rely also on national accounts. It could be argued that the only radical substitute to GDP as an index of development from a SD point of view would be some measure of need satisfaction. This follows directly from the well-known “Brundtlandian” definition of SD. If need satisfaction translates in subjective well-being, then the various indicators of perceived happiness, well-being, etc. would qualify as indicator of (sustainable) development.

Besides, one of the most active supporters of the EF, the “Redefining Progress” organization promotes both the EF and the Genuine Progress Indicator (GPI) as alternatives to existing hegemonic indicators. Yet, this is somewhat inconsistent because it comes to hold at the same time a weak and a strong conception of sustainability. Indeed, insofar as the GPI aggregates man-made and natural resources (valued in monetary terms) it implicitly assumes that they can compensate each other. It is therefore a weak sustainability indicator whereas the EF is a strong sustainability one\(^8\).

5. Conclusions

SD is a very young discourse. No wonder it is still in a controversy stage. The example of the US unemployment rate shows that even for less complex social problems, it can take several decades before a consensus can be reached on their definition, explanation and measurement. The burgeoning of competing aggregate indicators of sustainable development is both a manifestation of political vitality and a confirmation of the limited carrying capacity of public arenas. They simply have no room for an abundance of indicators. It is therefore crucial for SD to become able to express itself in one or two figures that might either take place beside the existing main indicators or drive them out. Despite their reluctance to do so, scientists and experts should strive to translate their controversies in reliable yet resonant aggregate index in order to keep SD present in the main public arenas while helping in framing it in a reliable and consistent way. The challenge is to keep the right balance between dramatization and faithfulness. On the other hand, if the discursive-interpretive stage (or facet) of policy-making needs few but resonant indicators, its problem-solving stage (or facet) needs several and less “dramatic” ones. The challenge here lies in keeping a link between the aggregate index and the more mundane operational indicators. This connection is necessary if one wants to maintain SD as a fundamental objective on the agenda of the public arenas and avoid the risk of purely strategic policies and indicators manipulation in this area.

Ideally, the one or two overarching SD indices should consist of the aggregation or transformation of headline indicators themselves likely to be decomposed in basic indicators more suitable for rational problem-solving uses\(^4\).
Notes and references

1 Agenda 21, 40-4.
4 See note 2.
7 Ortega (2005), p.11.
21 Stone, op.cit., p.11.
22 See note 18.
24 Schön and Rein, op.cit., p.5.
25 op.cit. p.8.
28 Because it would be impossible to have electors voting on every policy proposal.
30 Why, asked Hilgartner and Bosk, in 1988 “does the plight of the indigenous people of South America (who are suffering from the rapid destruction of their cultures, and who in some cases are being killed off in large numbers) receive less public attention than the plight of laboratory animals used in scientific research? Why are conditions and events in the Third World that affect the life chances of millions of people, both abroad and in the United States, the object of only the most cursory and superficial public attention except during ‘crises’? Why do toxic chemical wastes in landfills receive more public discussion than dangerous chemicals in America’s workplaces? Why do so few weep for the dying forest? (Hilgartner and Bosc, 1988, p.54).
32 Hilgartner and Bosk, op.cit., p.70.
34 I am indebted to Tom Bauler for drawing my attention to this.
36 Innes, op.cit., pp 122-123.
37 Innes, p.125.
40 "http://www.un.org/millenniumgoals/"
41 "http://www.baltic21.org/"
42 The situation can be different at the local level. For example, it seems that the “Sustainable Seattle” indicators, having been selected in a very participative way are endorsed by a large majority of the Seattle’s population. However, the overall diagnostic merging from the studies in the PASTILLE project is more lukewarm. See http://www.lse.ac.uk/collections/PASTILLE/images/FinalReportWeb.pdf.
44 Fisher (2003), op.cit., p.146-147.
47 As a matter of fact, ISEW, GPI and MDP border also on the “sustainability” dimension.
48 See Neumayer, op.cit.