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Giancarlo Vecchi
Politecnico di Milano (giancarlo.vecchi@polimi.it)

ONTOLOGIES, EVIDENCES AND POLICY MAKING: FOSTERING THE RELEVANCE OF EVALUATION IN THE RELATIONS WITH POLICY ACTORS

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Abstract

The debate on 'evidence-based policy making' deal with the role of evaluation, and of social sciences, in affecting the design of public programs. The reflection of many scholars is often translated in methodological terms and the preference of RCT designs is quite often the result. Indeed, we sustain a wider pluralism in the use of methods in evaluation, considering the different meanings that the term 'evidence' could have if we consider both the complexity of policies and the needs of the policy makers. Moreover, we suggest strategies to improve the relevance of the evaluators role in the policy making.

Key words: Evaluation; Evidence-Based Policy Making; Ontologies in Evaluation Research; Trading zones

1. Introduction: Relevance of evaluation research and the debate on evidence policy making

The capacity to influence the policy design and the decision-making processes is at the basis of the policy analysis' manifesto and of policy evaluation. Lasswell writes in 1971: "The policy sciences focus on the relevance of knowledge *in* as well as *of* decision. … Policy scientists are at home with the intellectual activities involved in clarifying goals, trends, conditions, projection, and alternatives." (Lasswell 1971:2-4). Wildavsky, on the same line, underlines: "The policy analyst seeks to reduce obscurantism by being explicit about problems and solutions, resources and results. …The purpose of policy analysis is not to eliminate advocacy but to raise the level of argument among contending interests." (Wildavsky 1969 and 1980). Following this position, policy-makers that desire to have success in dealing with collective problems on the policy agenda should be able to mobilize and use the best available knowledge (Hoppe 1999; see also Stone 2012).

Rapidly, Lindblom and Cohen recognize the difficulties of the relations between researcher and policy-makers, underlining the many faces of the knowledge utilization problem: "In public policy making, many suppliers and users of social research are dissatisfied, the former because they are not listened to, the latter because they do not hear much they want to listen to." (Lindblom and Cohen, 1979:1; see Majone 1980, too). They agree on the objective of policy analysis to provide enlightenment and knowledge production using scientific and analytical methods; but, at the same time, they claim that social researchers need to deal with the presence of other sources of information and analysis, as the ordinary knowledge; alternative sources that often are more available and easy to use for decision-makers. Then, they suggest that policy analysis needs to produce knowledge usable for the different needs that are emerging from the social interactions, the typical form of the policy making processes: the so-called policy-maker is not a unitary subject, but a policy process involves different actors, and their information and knowledge needs can vary for many reasons and aims: the solution of a public problem, but also the subjective interests and values, the construction of consensus, the improvement of the organization, the comprehension of the different actors' roles, etc. (Lindblom and Cohen 1979:60; see also Weiss 1979).

In the realm of policy evaluation, Carol Weiss was one of the first researchers in dealing with the problem of evaluation utilization. The questions are alike to those faced by policy analysts: "We are often disappointed. After all the "sturm und drang" of running an evaluation, and analysing and reporting its results, we do not see much notice taken of it. Things usually seem to go along much as they would have gone if the evaluation had never been done. What is going wrong here? And what can we do about it?" (Weiss 1988). Weiss follows Lindblom and Cohen in inviting researcher to reflect on the complexity of policy making and social interaction; she derives from her analysis the well-known distinction among the instrumental, the symbolic (Knorr 1997) and the enlightenment uses of evaluation; to these, the process use will be added, with the contributions of Cronbach (Cronbach et al. 1980) and Patton (1997), as another recognition of the pluralistic arenas that qualify the decision and implementation processes.

A rich debate that characterizes even currently not only the evaluation discipline (Vedung 1997; Forss et al. 2002) but also the policy studies and the social sciences in general. In fact, during the recent years, the movement called 'evidence-based policy making)' is proposing again the problem of how the production and diffusion of social research results could contribute to the improvement of public policies.

The starting point is now characterized by the complexity of public problems that decision-makers need to deal with: "The complex, technical, uncertain or theoretical nature of many policy problems – nuclear energy, genetically modified organisms on agriculture and food, issues to do with public health, or atmospheric decay – means that policy makers need scientific advice and judgement to inform or guide decision-making." (Stone et al. 2001: 25).

The evidence-based approach has emerged from the medicine and health policies sector; the spill-over directed to the social sciences can be explained with the aim to improve the public policy content using the same methods, research procedures and relations between researchers and users adopted by the medical sector;
Following Stone et al. (2001:31) the characteristic elements of the evidence-based approach are:

- Comprehensive analysis: research all existing evidence, information, research and literature;
- Systematic Reviews: assess the evidences;
- Where evidence is unsatisfactory, establish sound evidence through scientific research and evaluation: 'what works' approach as the gold rule;
- Research approach to be collaborative with the different research users: not only 'what works' but also 'fitness for purpose' approach;
- Communication initiatives to present and disseminate findings, to impact on the practices of individuals/organizations.

The reference to 'what works' drive the attention directly and clearly to the use of research design based on Randomized Controlled Trials (RCT), and this focus has triggered the debate on methods into the social sciences and has relighted it into the policy evaluation community.
Just a little part of the literature has analysed this theme starting from the ontologies that characterize the scientific research and the meaning attributed to the research designs in every different ontological model. The next chapter discusses the main findings of this debate.

2. Evidences and ontologies in the social sciences: lessons for the evaluation research

2.1. The meanings of 'evidence'

What is the meaning of 'evidence' in carrying on a research and in the relation between researcher and policy-makers?
First of all, we understand that the conclusions of a research, the results, are not simple 'opinions': are based on accurate analysis. A second way underlines that empirical elements are considered relevant and are collected to falsify or to confirm a hypothesis connected with a theory. We use the term 'empirical evidences' to explain that 'data' (with reference to appropriate methodologies and techniques) are collected, elaborated and evaluated – considering their relevance – and used as proofs to confirm (corroborate) or to reject a hypothesis. After that operations, evidences are organized in an argument to produce a relevant information for the research program (Majone 1989; Booth et al. 2008; Cartwright and Hardie 2012).[1] In other terms, "…we use theories to make claims; the claims are true because of an argument we find in a theory. The evidence is decisive in corroborating the argument or in directing our attention towards something else." (Maggetti et al. 2013:5).
For example, in the social sciences literature we find that the production of hypothesis can follow three directions, considering different aims: a) theory- building; b) theory-testing; and c) explaining a particular and puzzling outcome (see Beach and Pedersen 2013:11). In this direction, the components of a hypothesis are operationalized to detect the observable empirical manifestations of a phenomenon, and the collection of evidences consists in these operations.
However, the production of evidences in social sciences can follow different paths (Majone 1980) and this is why the literature suggests the opportunity to define standards to help in evaluating the quality of research results and their usability in the policy making processes: standards defined on

[1] "The evidence for a claim is supposed to help provide warrant for it; it is supposed to help justify your confidence that the claim is true. That means that evidence must figure in a good argument" (Cartwright and Hardie 2012:18).

the base of a hierarchy of methodologies and techniques, able to show the rigor and the limits of a research conclusions, to support practices and policy processes. For example, Nutley et al. (2012: 7) discuss the following two proposals, clearly derived from a 'what works' research question:

Two proposal of hierarchies of evidence based on study design (form Nutley et al. 2012:7)

• Level 1: Well conducted, suitably powered rendomised control trial • Level II: Well conducted, but small and under powered RCT • Level III: Non-randomised observational studies • Level IV: Non-randomised study with historical controls • Level V: Case series without controls Source: Bagshaw and Bellomo 2008:2	• 1. Systematic reviews and meta-analysis • 2. RCTs with definitive results • 3. RCTs with non-definitive results • 4. Cohort studies • 5. Case control studies • 6. Cross sectional surveys • 7. Case reports Source: Petticrew and Roberts 2003:527

These hierarchies consider that the social sciences "… strongly share or seek to emulate standards of good science and of effective scholarship as developed in the physical sciences, stressing the importance of using carefully checked data, analysing data rigorously, replication of information, critical testing of evidence and critical engagement with theories and models, and a conditional acceptance of 'knowledge' only to the extent that it survives falsification." (Barlow et al. 2014b: ch. 1).

Many authors underline, however, that are different important and relevant issues around the 'evidence problem', with particular emphasis on a) the ontologies that are, consciously or not, at the base of the researchers' methodological choices, and b) the different questions that policy-makers are asking in relation to the stages of the policy cycle.

The next parts of the chapter are dedicated to these issues.

2.2. Ontologies and types of evidence

Debates around the reasons to choose a particular methodology in developing a research are at the core of the policy evaluation community, since the foundation of the discipline. Scholars that present and comment the different positions (e.g. between quantitative and qualitative designs), define this as a debate around theories and approaches (Shadish, Cook and Leviton 1991; Stame 2016).

However, a relevant paper of Peter Hall (2003) is a useful starting point to examine in deep the relation between the methodological issues and the ontologies that are at the beginning of this kind of choices. It is a way to deal with the choices regarding approaches considering firstly why – consciously or not – a researcher decides to answer certain questions, avoiding others. The same focus has been developed more recently by Furlong and Marsh (2010).

Hall writes about the relations between ontologies and methodologies in political sciences, with specific reference to the field of comparative researches. He defines 'ontology' in these terms: "Ontology refers to the character of the world as it actually is. Accordingly, I use the term to refer to the fundamental assumptions scholars make about the nature of the social and political world and especially about the nature of causal relationships within that world… If a methodology consists of techniques for making observations about causal relations, ontology consists of premises about the deep causal structures of the world from which analysis begins and without which theories about the social world would not make sense. At a fundamental level, it is how we imagine the social world to be." (Hall 2003:373-4).

Following Hall, and Furlong and Marsh, ontology is crucial to methodology because the appropriateness of a particular set of methods for a given problems turns on assumptions about the

nature of causal relations they are meant to discover. In fact, for example, it makes little sense to apply methods designed to establish the presence of functional relationships, for instance, if we confront a world in which causal relationships are not functional.
To develop this argument, we consider three main ontologies: neo-positivism, realism and constructivism (or interpretivist ontology).

2.3. Neo-positivism

Considering the neo-positivist position, the world exists independently of our knowledge of it and of the way we conceptualize it: in other words, it exists beyond humans. A position shared with the realist ontology. On this base, social sciences work in a way similar to the natural sciences behavior and objectives: to identify regularly patterns (lawlike regularities) between social phenomena, through procedures of causal inference. The elaboration of a theory leads to the generation of hypothesis regarding the causal relationships among phenomena, and these hypotheses are tested by direct observation and analysis of empirical data; this direct observation constitutes an independent and objective test of the validity of a theory. The neo-positivist aim – explicit or implicit in the researches – is to make causal statements and to identify covering laws, following a *probabilistic* interpretation of the world: general laws, operative across space and time, from which specific cases can be explained; a logic of necessity is applied here, in the sense that they suppose a constant conjunction between the presence of a factor X (the explanatory variable) and the systematic observation of a dependent variable (outcome) Y (Hall 2003: 377; Furlong and Marsh 2010: 194).
This ontology is clearly adopted by King, Kehoane and Verba (1994), the authors of an influential book on the methodologies of social research, when they claim a strong preference for quantitative approaches in social sciences; they adopt a *nomological* form of inquiry, based on the causal inference analysis, whit specific orientation to statistic methods developed through counterfactual experimental designs (RCT). "Correlation is not causation" is also a frequent statement that reflect the raising interest of the social sciences for the Mill's method of agreement and difference, by which the causal relations between two variables can be inferred through the comparison of cases that are similar for all their characteristics with the exception of the variable of interest.[2] Following this model, and considering – for example – the analysis of a program, the outcome variable will be influenced, in the treated case, both by the program and by external independent variables; while the non-treated case will be influenced only by the external independent variables. The comparison between the two results allows a researcher to infer the level of the observed outcome caused (explained) by the program and the part explained by the external variable(s).
Within this perspective, the qualitative approaches are not excluded, and in fact the comparative method movement was committed with the adaptation of the approach. In any case, qualitative approaches are evaluated on the base of a reliability scale and are judged as a last resort when statistical analysis is not possible (King, Kehoane and Verba 1994:6; Goertz and Mahoney 2012:2-3): when the researcher is operating with 'small-N' observations or with a 'single observation', considering that statistical analysis can work only with 'large-N' observations.
Considering the debate on evidences to support policy making processes, the consequence of the neo-positivist approach is clear: the better evidences are those based on research designs that present: a) robust statistical findings to support causal inference regarding the relation between a

[2] Is worth to consider the recent challenges to this conclusion derived from the opportunities offered by big data, artificial intelligence and the computational capacity of the last generations of computers and software; with these instruments, a new perspective, the so called computational social science, is growing, asserting the usefulness of correlation conclusion derived from the analysis of massive amounts of data. See for example Lazer et al. 2009; Grimmer 2015; Foster et al. (eds.) 2017.

program and the observed outcome; from which follows: b) the high probability of the program success (or failure) if reproduced in other sites or in a new period in the future, since the result can be assumed a sort of general law (under the *coeteris paribus* condition). Following these preconditions, the randomized controlled trials is considered the golden standard model to realize researches with a robust internal validity; and to reach useful conclusions in terms of external validity, procedures of meta-analysis and systematic review are important, because they allow to drawing evidences from a range of studies that have analyzed a standard intervention (Nutley et al. 2012: 7; see also Davis et al. eds 2000).

2.4. The realist ontology

The realist ontology is committed not only with the explanation of the social phenomena in terms of causal relations between an independent variable and an outcome (if X, then Y); in fact, the main focus is to explain why Y tends to emerge when X is present. In other words, it studies the generative mechanism likely to bring about an outcome Y from a factor Y, considering a specific context. Mechanisms are causal generalizations about recurrent processes linking specified initial conditions and a specific outcome. This strategy deal with the complexity of social world: mechanisms are theories, and explanations through mechanisms show – through a *deterministic* logic – how the termination conditions (outcomes) are produced by the set-up conditions (e.g. a public programme and the context).

Realists share with neo-positivists the idea that the world exists independently of our observations and of our knowledge of it. However, unlike the neo-positivist position, realism contend two different views (Furlong and Marsh 2010:204):

a) The political and social phenomena are too complex to discover and to replicate regularities in terms of covering laws; the aim of social sciences can only be to find middle-range theories (something-true laws), as Merton suggested, based on the study of the mechanism(s) explaining the relationships between social phenomena; only the theorized mechanisms are portable and re-usable;
b) Not all social phenomena, and the relationships between them, are directly observable: there are deep structures that cannot be observed, and this plausible case for the existence of unobservable entities can be accepted by reference to observable effects which can only be explained as the products of such entities (Sayer 2000: 12). It is the case of the hypothesis of unobservable mechanisms, triggered in a specific context, that can explain the relationships between social phenomena, as theorized by Ray Pawson (2013) in the policy evaluation field (see Hedström and Swedberg 2005; Vecchi 2013).

At the same time, realists share with the constructivist ontology some points. Realists, on one side, adhere to the idea that social phenomena exist independently of our interpretation of them; but, on the other side, they recognize that our interpretation and understanding of social phenomena affects outcomes. Social sciences are committed with the study of reflexive agents that interpret and modify the social structures: "… there is a real world 'out there', but … outcomes are shaped by the way in which the world is socially constructed." Moreover, our knowledge of the world is theory-laden, and this imply the possibility of failure (Furlong and March 2010:205).

Following these assumptions, Pawson and Tilley (1998) proposes the model Context-Mechanism-Outcome, that underlines how a research, based on realism, should analyze the process through which a program, in a specific facilitating context (C), triggers the mechanism – or a pattern of mechanisms – (M) able to produce positive changes in the outcome (O).

Considering the methodological choices, the realist ontology recognizes the relevance of both quantitative and qualitative designs. The quantitative designs (and RCT models, too)[3] are useful to measure outcome. The qualitative designs (family that comprise methods with an *idiographic* orientation) are, in any case, crucial to analyze factors that are considered a central aim of the social research:

a) winner and losers of a program: to realist researcher, a study needs to explain not only the reasons for average measures, but at the same time examine in deep the causes of the tails or the outlier cases;
b) the study of the 'causes of effect' (Goertz and Mahoney 2012:41): the central objective of realism is to analyze the black box that connect initial conditions (priors) with an outcome Y; in other words, to reconstruct the processes that trigger a specific mechanism in a specific social setting, driving to a change, and to theorize the behavior and the dynamic of this mechanisms;
c) the contexts and the conditions that allow a mechanism to trigger its powerful forces.

The evidences produced by researches based on the realist ontology, therefore, are not restricted to answer the 'what works' question; at the same time (and more important), the capability to analyze 'for whom', 'in what circumstances' and 'why' is the focus of the efforts. A set of relevant distinctions for policy makers and to decide about the scalability of public policies. Moreover, as underlined before, the main evidence proposed is the theorization of the mechanism(s) linked to the policy success, because, following Pawson (2013), the transferability regards mechanisms not programs (see also Barzelay 2007).

2.5. The constructivist/interpretivist ontology

The constructivist ontology is well known in the policy evaluation field, thanks to a relevant movement inside the community; the books of Guba and Lincoln "Fourth Generation Evaluation" represents, in fact, a milestone in the debate about evaluation approaches (Guba and Lincoln 1989). This ontology claims that the world does not exist independently of our knowledge and understanding of it: the world is socially or discursively constructed: this ontology "… denies the existence of an objective reality, asserting instead that realities are social constructions of the mind, and that there exist such constructions as there are individuals (although clearly many constructions will be shared." (Guba and Lincoln 1989: 43).

Following these assumptions, it derives that we can analyze social phenomena only starting from our understanding of them: and these interpretations/understandings of social phenomena will affect the outcomes under investigations (e.g. the outcomes of public policies). Policy actors, and subjects in general, understand the 'world' and talk about it through the mediation of discourses, arguments, contexts and traditions. The 'objective' knowledge of the kind aspired to in the natural sciences and chased by positivists, from this point of view, is unattainable: researcher are part of the same context as social actors are. Knowledge is theoretically and discursively shaped, and this drive to the so called 'double hermeneutic': researchers interpret the social actors' interpretations (Parsons 2010:80; Furlong and Marsh 2010: 199-200). An argument of constructivism contends that "… people do one thing and not another due to the presence of certain 'social construct': ideas, beliefs, norms, identities, or some other interpretive filter through which people perceive the world." (Parsons 2010:80).

Inside constructivism coexist different schools; of worth the distinction between the position that claim an analysis of human relations based completely on an interpretive (or hermeneutic) search to understand meaning, without possibility to debates with other non-constructivist scholars

[3] See, however, the critical position of Pawson and Tilley (1998) against the RCT designs.

(postmodern). And, on the other hand, who considers the social sciences as a setting in which can have home other approaches, like positivism and realism: a division of labor justified by the different objectives of the researches. In any case, a specific focus remains in common: the attention on the role of interpretation as a guide of the human behavior (Parsons 2010: 81).
Considering the methodological side, researcher that embrace this ontology adopt qualitative designs, with a secondary role for quantitative approaches, especially for the counterfactual design. In evaluation research, these assumptions drive to the use of a hermeneutic/dialectic process, based on the interaction between observer and observed actors; scholars prefer methods like case studies, process tracing, thick descriptions, narratives, etc.; and the resort to techniques like interviews, focus groups, and vignettes that help them to interpret how people understand their context. The constructivist evaluation emphasizes the evaluator' responsibility in improving an effective interaction with beneficiaries and stakeholders; the reconstruction of the different representations of the policy results will allow to find a shared representation of strengths and weaknesses, useful to trigger a common learning process. It is a researcher's task to submit the developed arguments to an open debate among the actors involved, actors with divergent positions as well, to manage in a pragmatic way to make acceptable shared claims about how to improve programs.
In the realm of this ontology, the term 'evidence' refers to specific research factors as: the results of the actors' assessments regarding the implementation processes and program outputs; the improvements of the actors' capabilities and empowerment; the results of the deliberative processes and of the interactions among actors; the involvement of the whole range of actors; the development of factors as equity, public value, democratic principles (Fisher 1995).

2.6. Evidences and ontologies: lessons to improve the relevance of policy evaluation

To base the analysis of evidences on ontologies allow us to move the debate on methods in a background (just for a while); firstly, an evaluator should deal with issues regarding how to plan and rank the objective of a study to understand and to explain the social factors of the 'reality' that he or she considers relevant due the followed ontology.
This direction seems to back up scholars that suggest to adopt a *pluralistic approach* in selecting methods (see Maggetti et al. 2013:2; Stoker and Evans 2016a and 2016b; Stame 2016; for the so called 'perestroika movement' in political science see Schram and Caterino 2006); the aim is to learn to look at other approaches and at what others do, moving beyond the preferred paradigm, adopting a little bit of analytic eclecticism if we found fields with genuine progresses in the explanation of certain social phenomena. In evaluation research the *mixed- and multi-methods* approach suggest to follows this way (Johnson and Onwuegbuzie 2004; Stern et al. 2012; Creswell 2014).
In a responsible conduct of a research, an explicit reference to the preferred ontology is of worth, because it drives the researcher to compliant with it in choosing objectives and methods, and to answer the demands for a policy improvement. For example, from a neo-positivistic point of view, how to deal with both the internal validity the generalization problem; from a realist position, how to reconstruct processes in a reliable way and how manage the need of a systematic synthesis or meta-analysis; from a constructivist point of view, how to draw lessons from a specific site to use the emerged knowledge in another site.
In any case, no recipe book is available, and techniques are not – in general – incommensurable among them; is in the responsibility of the researcher to choose and justify the selections he or she made, because "… the language of the qualitative-quantitative divide or the rational versus the socially constructed is no longer valid, if ever was. It does not match what social scientists do." Maggetti et al. 2013:6; Goertz and Mahoney 2012).

3. Evidences and policy cycle

The analysis of the different ontologies shows us, considering public programs, that the meaning of the term 'evidence', answers questions not only about the results reliability of evaluations, but also about factors as the 'why' we observe specific outcomes, the beneficiaries and stakeholders involved, the social understandings of the program, the value developed, etc.

A second way to articulate the analysis of the 'objects' that can be considered as 'evidence' provided by a research (and by an evaluation research) can be developed considering the stages of the policy cycle. Other elements come to light, that are of interest for policy-makers.

In the ex-ante phase, for example, two dimensions are relevant to influence the social and governmental agenda: a) the capability to recognize emerging problems and b) to define the recognized problems in a way useful to find solutions, to support policy design and to collect consensus in the decision processes (see Hoppe 2010; Cairney 2016). In the first case, the evidences can derive from the now available techniques to analyze big data, or from more traditional researches able to detect size, localization and dynamic of the phenomena; in the second case, study should consider at the same time both the characteristics of a phenomenon and the values connected to the available solutions. In the latter situation, learning from good practices or from the experiences of others, involve clearly an evaluation analysis, with the capacity to drive transferability: in other words, policy-makers need information (e.g. evidences) not only about 'what works', but also about how to adapt and implement the program in a new context, triggering what sort of mechanisms (see Pawson 2013; and Bardach 2004; Barzelay 2007; Vecchi 2013). Moreover, the literature on policy-change underlines that policies incorporate paradigms, in which values and ideologies play a role; and the literature on complexity suggests to pay attention to the uncertainty factors linked to an intervention and to the expected results; policy-makers will consider as evidences information regarding the compliance with their core beliefs and interests; and information about how to govern the implementation phase (see Cairney 2012; Capano et al. eds. 2015).

The decision making and the implementation phases are at the center of many evaluation researches; the theory-based evaluation school is clearly committed with this focus, and many scholars that are involved in the evidence-based policy making debate are underlining the relevance to study the implementation phase of public programs (Cartwright and Hardie 2012). Policy analysis is adding interesting in deep analyses, developing the concept of governance and the role of networks, contributing to enlarge the types of evidences useful to decision making. For example, the interest is on the study of the actors involved, the role played and the mobilized resources associated with the observed policy outcomes. Moreover, a stream of researcher is committed with the study of the engagement and compliance of implementers and beneficiaries, with the aim to overcome the barriers that often limit the success of policy implementation (see Weaver 2014). All factors that an evaluator can use in formative and summative evaluations to suggest strategies to program improvements.

Considering another interesting field, the literature on decisional and implementation processes criticizes the often too linear representation of policy life, in particular when programs present a high level of complexity (duration, multitude of actors involved, multiplicity of implementation sites, ambiguity of problems, etc.). The wicked problems and complexity debates (see Forss et al. Eds. 2011; Funnell and Rogers 2011; Cairney 2012; Head and Halford 2013) are affecting the methodological side of researches, to find ways useful in analyzing the causal configuration that can explain outcomes (see Ragin). These proposals underline that studies and evaluations based on RCT are strong in examining simple interventions, with clear causal hypothesis and treatment processes subjected to careful control. When these conditions are weak and results are different from site to site, or among beneficiaries, the analysis of the implementation processes and of the generative

mechanisms becomes a relevant objective, to learn about not only 'what works' but even 'what happens' (Petticrew 2015; see also Cartwright and Hardie 2012).

4. Evaluation, methodological pluralism and relations with policy-makers: can we improve the relevance of evaluation?

The argument that support the different evidences that we need to produce to improve the evaluation relevance in policy making can be developed considering the debate on knowledge (and evaluation) use. It is an aged discussion, now revitalized by the evidence-based policy making debate.

From one side, researchers justify the distance between research activities and policy making. A first point of view claims the well-known concept of enlightenment proposed by Carol Weiss: evaluation and scientific research can indirectly produce learning and can affect policy decisions even after a long period of time; we need to consider not only the instrumental use, but also it is a mission of scientific research the capacity to shaping values and modify the conceptual frames or policy paradigms. Another point of view underlines the perverse use of scientific knowledge often made by policy-makers: when researcher work too close the decision processes, policy makers are tempted to use the researches results to legitimate solutions or positions already decided. To deal with this risk, a typology of researcher-policy maker relations, based on the work on the existing or new paradigms, has been developed:

a) a consensual approach, based on the work around existing paradigms: refers to situations where there is broad agreement among policy makers and researchers about the main issues of concern and the ways in which these should be addressed;
b) a contentious approach, in which researchers act as 'moral critic', placing themselves more on the sidelines of public policy: they may not always contribute to policy development directly;
c) a paradigm-challenging approach, in which researchers might take a stance outside the prevailing paradigm, using their work to problematise established frameworks and ways of thinking and to search for new principles (Nutley et al. 2007: 11-12; see also Young et al. 2002).

It is a classification that justify the value of the 'ivory tower' in which scholars are working, claiming the opportunity to participate to a policy debate using different strategies.

Moreover, another position is represented by the well-known theory of the 'two communities': the relational difficulties between the two sides derive from the two different rationalities and cultures that characterize policy-makers and researchers, and policy-makers do not have the instruments to understand and to interact with evaluators or scientific knowledge producers in general (Dunn 1980; Tenbensel 2006; Williams 2010).

On the opposite side, an increasing part of the debate identifies both the difficulties of the research world to understand the work and the needs of policy makers, and the barriers to the use of evidences (Stoker 2015; Cairney 2016); a short introductive list of claims considers:

- social sciences focus on only one specific policy aspect, but policy makers need a multi-dimensional view and need to understand the complexity of interactions and relations (Bardach 1984);
- the social sciences evidences are contingent and confined: there are few 'laws' in their realm, often restricted to specific contexts and rarely conclusive (Nutely et al. 2007; Cairney 2016);
- policy makers need not only evidences but narratives, too (Majone 1989; Bardach2009; Kettl 2017).

- policy makers have to make decisions in the face of uncertainty and ambiguity, with risks affecting their position and life of their organizations; thus, the evidence regarding policy are weighted using different parameters (Kettl 2016; Cairney 2016);
- policy makers use both scientific and ordinary knowledge (experiences, direct observation, etc.) to define their position (Lindblom and Cohen 1979; Williams 2010; Kettl 2017);
- policy makers make decisions in pluralistic settings (often in emergency conditions), where evidences can be contested: some actors can judge as relevant certain evidences, instead of others, expecially when there is a lack of reliable or uncontested evidence on the nature of a policy problem or the effectiveness of solutions (Cairney 2016);
- 'policy makers' are in fact different subjects: politicians, bureaucracies, other experts, business and corporate sector, civil society ant third sector organizations, media, etc.; all of them can use evidences to affect policy making, but they drive to experts different demands and need different form of relations and communication (Barlow et al. 2014a and 2014b).

The position of Carol Weiss represents an important lesson to avoid only expectations of research uses in a short period, recognizing the value of the researches developed inside the academic campuses. In the field of policy analysis and evaluation, for example, it is worth to distinguish the study 'of' the policy processes from the study 'for' the policy processes, underlining the relevance of the firsts. At the same time, we claim that the analyses 'for' the policy processes improve the impact of social sciences and add materials and reflections for the development of the theoretical development of the disciplines.

In fact, the question of how to improve the capacity of evaluation and social sciences to affect decision making process is still open, even with direct ways (see Hastings and Margolis 2015). Recently, Radaelli underlined that researcher can reach better level of influence if they are able to press policy-makers as a community, to affirm and sustain specific policy results (Radaelli 2017); and Capano, in the same venue, contended the idea of the entrepreneurial activities that a researcher need to develop to audience and diffusing his or her studies (Capano 2017).

We will start from these suggestions to develop, in the next chapters, some strategies to follow in managing the relations inside the policy process, to improve di impact of the researches on policy making.

5. Improving the interaction between policy-makers and evaluators: some strategies

To deal with the direct utilization of evaluation studies, when a researcher accepts the challenge of a work inside the policy making and to play a role in the interactions with policy makers, which strategies can help him or her?

Proposals that come from the study of policy learning offer some interesting suggestions. Dunlop and Radaelli (2013), for example, developed a model based on two variables: the low or high level of problem tractability, and the low or high level of actors' certification. From the intersection of the states of the two dimensions, they derive four boxes that correspond to ideal types of learning that involve organizations or networks of actors: epistemic learning, reflexive learning, learning trough bargaining and learning in the shadow of hierarchy.

		Problem tractability	
		Low	High
Certification of actors	Low	Reflexive Learning	Learning through Bargaining
	High	Epistemic Learning	Learning in the shadow of Hierarchy

Hierarchic learning happens when we have problems with low complexity (high tractability) and high certification of actors: organizations and network learn on the base of the orders, sentences, dispositions of a powerful subject (courts, political principals, etc.). Here we have no space for an autonomous role of knowledge givers.
Learning through bargaining represent a case in which, with high tractability of problems and low certification of actors, the goals and interests of the different policy makers are prevailing over the role of researchers; learning is a by-product of bargaining.
The third type, epistemic learning, with high certification of actors and high problem complexity (low tractability), considers learning as largely affected by direct knowledge utilization, with researchers able to play the role of 'teachers' in cooperation with policy-makers.
The latter type, reflexive learning (low problem tractability and low certification of actors), covers situation in which knowledge is contested, but there are rooms for mutual understanding between policy makers and researcher, through explorations and experimentations.
This framework presents many factors of interests. First of all, the certification: every evaluator should consider how policy makers will judge his or her work; this is why often evaluation researches are realized through teams of experts with different specialized capabilities.
Considering the ideal types, the recommended suggestion is to have the capacity to transform bargaining and hierarchical settings in one of the other two conditions. The epistemic one hold the main interest, of course, but under conditions that are not always available; the reflexive one presents a more recurring situation: the question is how to manage a constructive dialogue between researchers and policy-makers in dealing with wicked problems, avoiding the risks of the capture in a policy-based evidence making process (i.e. a distorted use of the knowledge offered). A reflection could be of interest regarding the 'trading zone' concept.
Trading zone is a concept developed by Peter Galison, a scholar of science and technology sociological studies; he used this term to explain innovation and paradigmatic changes processes in the natural sciences field, claiming that groups with different expertise and objective can find and develop opportunities for collaborations and for pursue common objectives: "Like two cultures distinct but living near enough to trade, they can share some activities while diverging on many others. What is crucial is that in the local context of the trading zone, *despite* the differences in classification, significance, and standards of demonstration, the two groups can collaborate." (Galison 1997:803). He noticed "that it often occurs through interaction between groups belonging to different disciplinary fields which, although they have different objectives and viewpoints, use forms of exchange by building an intermediate language which allows them to communicate and create new artefacts" (Balducci and Mäntysalo 2013:2). Here, actors have different expertise and are involved in partial exchanges that are fostered by *a physical and, at the same time, conceptual space of common interest*, even in the case of partial conflicting strategies: full agreement is not therefore necessary.
We can hypothesize that even in evaluation processes there is an open opportunity to organize and define trading zones between evaluators and policy makers, subjects with a different political and professional expertise, that allow the construction of a conceptual toolkit and a language able to provide new lenses for both the two parts: for experts, to improve the comprehension of the policy processes in the specific contexts; for policy makers, to understand the experts' language and the researches results, and to translate them in policy actions. Activities that can be improved through the involvement of brokers of knowledge (Giest et al. 2015), subjects that have the capability to foster the connection between experts and policy actors.

A second strategy that comes from policy analysis underline that to foster the relevance of researches, scholars should improve their knowledge about the 'real' functioning of policy

processes, in a specific policy sector and context (Dente 2016); only to adopt a research strategy based on micro-foundations and a micro-positive approach (Dunn 2008), policy and evaluation study could address the needs, strategies and understanding of policy makers, and formulate useful advices.

Following this direction, a suggestion for evaluators is to adopt (mentally) the position of a 'policy designer' to draw lesson from a program analysis and to develop proposal to deal with the problem at stake. A design, using the words of Herbert Simon, is an artefact defined and implemented to obtain an intentional change; in designing the experts should act both as a problem solver and a solution seeker (Simon 1996:111). Thinking in terms of 'program design' means that the evaluator should be able to understand the main characteristic a program should have to transform or mitigate a problematic situation, considering the specific context and the real actors involved. The theory-based evaluation and the studies on policy process can help in tracing the path from input to outputs and outcomes; however, if we consider policies not only in terms of an instrumental flow directed to expected output and outcomes, but in terms of policy activities, we are driven in empirical sectorial settings in which many actors are operating, some agreeing with the policy orientations, some others conflicting, and other actors in a neutral position. "A helpful distinction can be made between accounts that explain outputs and those that seek to explain activity. To describe the action as 'policy-making' is to highlight the apparent output – 'developing a policy on X' – and to see the participants as contributors in this development." (Colebatch et al. 2010: 17). The evaluators as 'policy designer' needs to develop the capacity to understand, still maintaining an independent position as researchers (continuing to 'speaking truth to power', to remember the Wildawsky lesson), the needed instruments, solutions and strategies to help the different actors in dealing with the collective problem at stake. Policies are not only theories, but at the same time 'actors working in contexts'. The relevance of an evaluation could be improved if the evaluator will analyse results and, at the same time, will suggest solutions and alternative strategies to help actors in coping with the policy problems. In other terms, there is not a direct and unproblematic link between evaluation research evidences, policy decisions, and expected changes in analyzed policies: "This takes scientists well outside their comfort zone, and many may prefer to remain aloof from the political process to maintain an image of objectivity (or to remain guarded, to protect an image of an objective expert). This may be appropriate, but it is important to recognize that it is a choice—to produce scientific evidence and accept its limited unpredictable impact on policy and policymaking." (Cairney 2016:122).

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