

Can interpretive policy analysis contribute to a critical scholarship on regional innovation policy studies?

Ainhoa Arrona^{1,2}

¹Orkestra-Deusto Foundation, Pº Mundaiz, 50, 20012 Donostia-San Sebastián

²University of Deusto, Pº Mundaiz, 50, 20012 Donostia-San Sebastián

ainhoa.arrona@orkestra.deusto.es

JEL Codes: 030, R58

Key words: regional innovation policy, policy analysis, interpretive policy analysis, action research, innovation studies

www.orkestra.deusto.es

Resumen

Hay un creciente número de voces críticas dentro de la comunidad de la innovación que plantean cuestiones sobre la importancia del estudio de las políticas de innovación para las prácticas en materia de políticas de innovación. Con el fin de contribuir a una mayor profundización en el estudio de las políticas regionales de innovación, este artículo, se basa en las reflexiones realizadas a este respecto por Morlacchi y Martin (2009), seguidas posteriormente por Uyarra, Flanagan y Laranja (Flanagan & Uyarra, 2016; Flanagan, Uyarra, & Laranja, 2011), así como en cuestiones planteadas y desarrolladas por expertos en investigación acción en general y en la “investigación acción para el desarrollo territorial” (Karlsen & Larrea, 2014a) en particular. Concretamente, tomando como partida la idea de que una mayor diversidad de aproximaciones en torno al análisis de las políticas beneficiaría a los estudios sobre innovación, el artículo defiende la incorporación de ideas desarrolladas por expertos en el análisis interpretativo de las políticas. El artículo presenta conceptos y aproximaciones que en nuestra opinión requieren una mayor profundización o fortalecimiento, enfoques colaborativos o dialógicos hacia el análisis de políticas y unas aproximaciones constructivistas hacia el aprendizaje de políticas.

Abstract

There are an increasing number of critical voices within the innovation community who are raising questions around the relevance of innovation policy research to innovation policy practice. With the aim of contributing to a more relevant regional innovation policy research, this paper, builds on reflections along these lines presented by Morlacchi and Martin (2009), followed by Uyarra, Flanagan and Laranja (Flanagan & Uyarra, 2016; Flanagan, Uyarra, & Laranja, 2011), as well as issues raised and developed by action research scholars in general and the ‘action research for territorial development’ approach (Karlsen & Larrea, 2014a) in particular. Specifically, based on the idea that a greater diversity of approaches to policy analysis would benefit innovation studies, the paper argues for incorporating ideas developed by interpretive policy analysis scholars. The paper presents concepts and approaches that in our opinion require further exploration or strengthening, including the practice perspective, ‘ordering devices’, collaborative or dialogical approaches to policy analysis and constructivist approaches to policy learning.

Laburpena

Berrikuntza arloko adituen artean, gero eta ahots kritiko gehiagok azpimarratzen du berrikuntza politiken inguruko ikerketaren garrantzia berrikuntza politikak gauzatzeko. Eskualdeko berrikuntza politikaren inguruko ikerketari ekarpena egiteko asmoz, lan hau Morlacchi eta Martinen (2009) ekarpenetan oinarritzen da, aurrerago Uyarra, Flanagan eta Laranjak jarraituak (Flanagan & Uyarra, 2016; Flanagan, Uyarra & Laranja, 2011), baita ikerketa-ekintza prozesuetako adituek, orokorrean, eta “lurralde garapenerako ikerketa ekintzako” adituek (Karlsen and Larrea, 2014a) bereziki, ateratako ondorioetan ere. Zehazki, politikak aztertzerakoan askotariko hurbilpenek berrikuntzaren inguruko ikerketa aberastu dezaketela uste dugunez, lan honek politiken azterketa interpretatzailean aditu direnek landutako ideiak txertatzearen aldeko argudioak ematen ditu. Lanak gure ustez sakontze edo sendotze handiagoa merezi duten kontzeptuak eta hurbilpenak aurkezten dizkigu, kontuan hartuko dituztenak, besteak beste, politikak aztertzeko elkarlaneko edo elkarrizketako ikuspegiak eta politiketatik ikasteko hurbilpen konstruktibistak.

1. Introduction

There is a solid consensus, in both theory and practice, that knowledge and innovation capacity are the main driving forces behind the competitiveness of territories (Aranguren & Wilson, 2014; Navarro, 2009; OCDE, 2011; The World Bank, 2010; Tödtling & Tripl, 2005). This theoretical and practical consensus has made innovation promotion and innovation policies a central element of regional development strategies (OECD, 2011; Tödtling & Tripl, 2005).

Innovation policies are, generally speaking, the policies or public actions that influence innovation processes – i.e. development and diffusion of innovations (Chaminade & Edquist, 2010; Edquist, 2011). They have received a great deal of attention in the innovation literature, either directly, by taking them as the object of analysis, or indirectly, through discussing policy implications or policy recommendations deriving from innovation studies (Borrás, 2008). Innovation policy literature and practice are thus inevitably linked to the ideas developed within innovation studies, a ‘thematically oriented scientific field’ (Fagerberg & Verspagen, 2009, p. 229) whose different works share certain concepts and frameworks, namely an evolutionary economics framework, an interactive view of innovation, the systems of innovation approach and a resource-based view of the firm (Martin, 2012).

Such ideas, especially evolutionary and systemic perspectives, have strongly influenced current thinking on innovation policy (Chaminade & Edquist, 2010; Laranja, Uyarra & Flanagan, 2008). Although various scholars have shown concerns about the use of (regional) systemic frameworks for policy orientation (e.g. Dotti, 2014; Mazzucato, 2016; Navarro, 2009; Uyarra, 2007; Uyarra & Flanagan, 2009, 2010), these rationales have had significant influence on innovation policy practice. At the regional level, frameworks derived from these ideas – such as the regional systems of innovation framework or recently, the smart specialization strategy approach – have been widely adopted by regional policymakers for innovation policy development (Aranguren et al, 2015; Borrás & Jordana, 2016; Uyarra & Flanagan, 2009).

In general terms, the influence of systemic and evolutionary policy rationales has placed the focus of innovation policies on the whole system and its interactions, centring on collective action more than on individual organizations (Lundvall & Borrás, 2005). The role of policy is to enable experimentation and learning, and to improve linkages within the regional system. These rationales are thus related to soft instruments that seek to foster learning, promote connectivity through collaboration (industry–university or between other organizations), support networking or clustering; alter governance processes or shape institutions (Laranja et al., 2008; Martin, 2016).

The broad and systemic perspective as a guiding rationale for innovation policy, which joins other existing rationales, has increased the complexity of policymaking and made policy design more challenging (Borrás, 2008; Laranja et al., 2008). The introduction of new instruments, the interactions among them, the coexistence of different policy rationales, the inclusion of new issues and thus new needs for coordination, the activism of different territorial scales and the softness of policy instruments within recent rationales are believed to have resulted in more complex institutional frameworks for innovation policymaking and in an increasingly complex policy field (Borrás, 2008; Flanagan et al., 2011; Laranja et al., 2008; Magro, Navarro & Zabala-Iturriagagoitia, 2014; Magro & Wilson, 2013; Martin, 2016)

In this more and more complex policy field, there are a growing number of critical voices who are raising questions around the relevance of innovation policy research to innovation policymaking. This paper aims to contribute to some elements of this debate posed by various scholars in the community of innovation scholars with the greatest influence in regional innovation policy thinking. It seeks to do so by arguing for the incorporation of more diversity in the understanding of the policy phenomena and the role of the policy analyst in this research field.¹ Particularly, it argues for concepts, views and approaches developed by interpretive policy analysis scholars in policy sciences literature.

¹ There is a body of literature related to STI, STS and innovation studies that is not covered by this paper because it constitutes a distinct body of thought (Morlacchi & Martin, 2009) that has not been so influential for regional innovation policy thinking or practice. We are aware that some of the ideas or approaches that we argue for in this paper are already present in some of that literature.

The paper is structured as follows: First, issues raised by innovation scholars related to the relevance of innovation policy analysis are introduced as the starting point. This is followed by a very brief reflection on the diversity of approaches to conceptualizing policymaking and policy analysis, in order to highlight the range of views that does not seem to be adequately represented in regional innovation literature. Finally, the paper focuses on one such strand, interpretive policy analysis, in order to extract ideas, concepts and models which in our understanding, can contribute to enriching and complementing existing views in regional innovation policy analysis. The paper concludes with a summary and final thoughts for further exploration.

2. The challenge of increasing the relevance of innovation policy research

A brilliant and profound reflection has been offered by Morlacchi and Martin (2009), who assert the need for a more critical scholarship to reflect on the means and goals of Science, Technology and Innovation (STI) research. STI studies, Morlacchi and Martin (2009) maintain, have different components. Three of them are linked to a technocratic view: finding solutions based on theoretical knowledge, searching for opportunities to apply solutions and following procedures to solve problems. In contrast, the fourth component, policy scholarship, goes beyond the technocratic perspective, aiming to shape 'ways of thinking and learning about society's problems, and to understand how key actors in the policy process come to understand those problems' (p. 573). This type of scholarship questions the values behind the policymaking process, provides a better theoretical understanding of the policy process and can better contribute to policy debates.

Morlacchi and Martin (2009) assert that policy scholarship tends to be a forgotten dimension and thus, they call for ongoing reflection around the balance among the four components within the innovation community. In their opinion, critical scholarship presents three kinds of challenges: (1) epistemic challenges, related to the value of concepts and frameworks, and to the aim of understanding how social problems are constituted and how these become

research problems; (2) normative challenges that involve questioning who is benefited and harmed by research, based on the idea that research is never neutral and inevitably leads towards certain (desired or undesired) outcomes; and (3) practical challenges that involve questioning how much innovation scholars contribute to resolving these challenges.

Focusing specifically on epistemic and practical challenges, we concentrate on two issues raised by different scholars in innovation studies. Borrowing terms used by Hajer and Wagenaar (2003), such issues can be categorized as part of a *philosophy of representation* and a *philosophy of intervention*. In the former, we pose the question of how well innovation literature captures the real policymaking world; in the latter, issues related to how policy analysis helps innovation policymaking in practice.

2.1. The world of representations: Poor policy comprehension about the policymaking process

Several innovation scholars highlight the lack of understanding of real policymaking processes in the innovation literature, and the resulting absence of rationales, concepts or realities from the policy world when analysing or proposing actions for innovation policy. In other words, following on from the description of the dynamics between research and policy provided by Stone et al. (2001), we could frame the problem as poor policy comprehension among researchers about the policy process and the inclusion of research within it.

Critiques underline that most studies leave out 'the real life of policies' (Borrás & Jordana, 2016, p. 1), that 'policy recommendations are surprisingly blind to the actual policy processes' (Sotarauta & Kosonen, 2013, p. 1), or that the rationales of policymakers are absent when analysing innovation policy rationales (Laranja et al., 2008).

However, different authors seem to have different underlying assumptions when making such statements. Whereas some (e.g. Borrás & Edquist, 2016; Borrás & Jordana, 2016) seem to point towards analysis of current policies as a means of

producing better policy design, others (e.g. Flanagan & Uyarra, 2016; Flanagan et al., 2011a; Karlsen & Larrea, 2014a; Laranja et al., 2008; Sotarauta & Kosonen, 2013) present a more profound critique of this poor understanding of the policymaking process and the policy world. In other words, it is not an issue of more intelligence and a better analysis of innovation policy problems to design better policy instruments, but a question of understanding what real policymaking processes actually are and the different dimensions and elements involved, which brings the very idea of such ideal designs into question.

A very extensive and enlightening analysis of this issue – in fact derived from Morlacchi and Martin's (2009) assertion – has been carried out by Flanagan and Uyarra (Flanagan & Uyarra, 2016; Flanagan et al., 2011). They argue for the adoption of a 'truly' evolutionary approach in innovation policy studies in order to make it more useful for innovation policymaking (Flanagan & Uyarra, 2016). Flanagan et al. (2011) highlight a contradiction that exists in much of the innovation literature: whereas innovation is treated as a non-linear and dynamic phenomenon, this same literature outlines implicitly linear policy processes. As they extensively demonstrate, in adopting such a perspective, the literature overlooks the complexities generated by policy actors and their agency, goals, ideas and rationales involved in policy action, ignoring basic elements that are very much a part of the nature of policy and policymaking.

Flanagan and Uyarra (2016) further reflect on these issues, calling for a debate within the innovation policy community, aimed at improving the relevance of innovation policy analysis. Specifically, they present four 'dangers: 'idealizing theoretical rationales and policymakers', 'treating policies as tools from a toolbox', 'too much faith in rational design and coordination', and 'an atemporal approach to policy analysis'. With these dangers, Flanagan and Uyarra (2016) highlight certain wrong (implicit or explicit) assumptions present in innovation studies. These assumptions and missing elements include overestimating theoretical rationales in policymaking and the presumption that theory-derived ideas are the main source of policy development; downplaying agency and the active role of policy actors in shaping policy; treating instruments as static tools with a merely instrumental function; the illusion of the idea that it is possible to

design 'correct' policy mixes; and a lack of attention in innovation policy studies to the path dependency of policy processes, that is, to the impact of past decisions, institutions, existing policies and actor/role mixes on the policies adopted adoption of policies. In contrast to those prevailing ideas, Flanagan and Uyarra (2016) emphasize the agency and interpretation of actors throughout the policy development process; the meaning, values and interests embedded in policy instruments; their changing nature; the emergent property of policy mixes and the unintended ways that instruments interact; and the importance of implementation in shaping policy.

In summary, Flanagan and Uyarra (2016) argue that the linear model of public policy and all ideas related to it must be abandoned by innovation policy research if it is to be useful to the policy community.

2.2. The world of intervention: Fostering learning, collaboration, governance, participation ... But how?

Learning, collaboration, experimentation and horizontal modes of governance, these all seem to be key words in innovation studies. Fostering learning and multi-level governance modes, including vertical and horizontal coordination, are generally two of the key remedies prescribed for better policymaking (Dotti, 2014; Edler, Kuhlmann, & Smits, 2003; OECD, 2011).

Deriving partly from the prevailing systemic view in innovation studies, learning is thought to be a crucial factor in both innovation processes and policy processes. Interactive learning between actors is considered the main source of innovation; institutions and networks are seen as producers of such learning; and soft instruments, which among other things, promote learning, are fostered (Chaminade & Edquist, 2010; Laranja et al., 2008; Uyarra, 2007; Uyarra & Flanagan, 2009, 2010). Learning is also thought to be of vital importance to innovation policymaking (Aranguren et al., 2016a; Chaminade & Edquist, 2010; Flanagan & Uyarra, 2016; Koschatzky & Kroll, 2007; Mazzucato, 2016; Nauwelaers & Wintjes, 2002) and emerges as one of the axes of the governance required for systemic innovation policies (Borrás, 2008; OECD,

2005).

In addition, recognition of the systemic nature of innovation and the complexities of the field of innovation policy has led to a consensus regarding the need to adopt more horizontal modes of governance in innovation policy (Arnold et al., 2002; Borrás, 2008; Edler et al., 2003; Laranja, 2012; Magro et al., 2014; OECD, 2005). Despite differences with regard to the exact meaning or specific focus, most innovation scholars call for greater coordination between policies at different territorial levels and in different intervention fields; between instruments; between departments or agencies within a government; between institutions at different administrative levels; and between governments and stakeholders. Furthermore, participatory bottom-up processes are also increasingly viewed as necessary for strategy development (i.e. *entrepreneurial discovery processes* in Smart Specialization Strategies), for mission-orientated policies (Mazzucato, 2016) or for the customization of policy instruments (Sotarauta & Kosonen, 2013).

However, there is much less literature which delves into how these aspects (learning, horizontal governance and collaboration) can be fostered or how they can be promoted through research, a question long posed by action research scholars. In our view, this constitutes somewhat of a contradiction, since the literature recommends the use of instruments that the same literature does not include in its research agenda. As argued by Palshaugen (2014), in spite of the 'interactive turn' in innovation policy, there is a scarcity of research focusing on the organization and outcomes of the meeting spaces that are recommended and fostered in innovation policymaking, and a lack of attention to them in innovation studies.

The research community and scholars at Orkestra – Basque Institute of Competitiveness have had a special interest in and inclination towards action and the impact of research on practice. Specifically situated within the policy field, policy evaluation and action research emerge as two ways of linking research to practice. Evaluation establishes itself as an instrument for policy change through policy learning (Aranguren et al., 2016), and action research as

a strategy for fostering learning and change (Aranguren & Larrea, 2011; Estensoro & Larrea, 2016; Karlsen & Larrea, 2014; 2014a, 2014b, 2016; Karlsen et al., 2012a, 2012b). Based on a critique of the lack of focus on the social side of innovation and on micro-processes, and on the prevailing linear view of policymaking in innovation literature, Karlsen and Larrea (2014a, 2014b, 2016) propose action research as a strategy of fostering territorial development, governance, innovation and policy learning. In Karlsen and Larrea's (2014a) view, the researcher can be a facilitator in processes for generating *collective knowing* through the production of social capital, through consensus-building, through changing communication patterns, through a critical approach that makes self-evident assumptions explicit, and through deep and ongoing dialogue. Researchers thus become key players in fostering learning and collective knowing for territorial development, governance and policy development.

However, these types of approaches, which assign research a direct and active role within policy development processes, with varying degrees of emphasis, constitute a significant minority and an exception in innovation studies.

3. There is no one way of understanding policymaking and approaching policy analysis

In our view, the two problems described above – the failure to consider the complexities of policymaking in the innovation literature and the lack of attention to how research can contribute to fostering elements that are prescribed by that same literature – could be ameliorated by introducing more diversity into the way policy analysis is approached in innovation literature.

Indeed, policymaking is far from being a linear, simple or exclusively reason-driven task, the view that can be seen as underlying some of the assumptions present in much of the innovation literature. As explained by Hager and Wagenaar (2003), the emergence of new actors and new open-ended institutions has resulted in changes in the already complex policy world. The

'topography' of politics and policymaking has changed: new political spaces are emerging; transnational policy discourse or multi-level governance have replaced the matryoshka-like (p. 8) institutional system, where lower levels of government fit inside higher ones; party politics and bureaucratic structures have lost their central role and there is now space for policy entrepreneurs. Therefore, politics and policymaking now take place in spaces that exist in an 'institutional void' (p. 9). Moreover, the radical uncertainty within which policymaking occurs brings the idea of 'absolute knowledge' into question and new strategies for the inclusion of knowledge are required. Likewise, an awareness of the interdependence between actors makes policymaking an exercise in creating communities of action, where the need to tackle challenging problems through forms of governance other than traditional government means that trust becomes vitally important.

Certainly, in such a context, the 'high modernist ambitions' of policymaking and policy analysis – i.e. the goal of making a better world based on confidence in human ability to measure, monitor and somehow control that world – are not possible (Goodin et al., 2006). The relational and persuasive nature of policymaking; the political character of policies; the bounded rationality of policymakers; the emerging, self-discovery and learning aspects of policymaking; path dependency or other material, social, political and ideational constraints, all make instrumental rationality and the aim of control and command a false illusion and an impossible endeavour (Goodin et al., 2006)

Policy sciences literature has mostly moved away from the idea of rationality or linearity, and almost all strands or theories recognize that the policymaking process involves the complex interaction of institutions, policy networks, exogenous factors, ideas and choices made by actors (Cairney, 2013). Nevertheless, the various strands or theories focus on different levels of analysis, concepts and frames of reference, and have different views on the policymaking process (Cairney & Heikkila, 2014). Hence, policies can be viewed as, for example, made by unitary actors and implemented hierarchically; the results of coalitions among independent actors with different political rationalities; a process of argumentation; a product of independent policy

activities; or something shaped by soft institutions and the interactions among actors (Enserink, Koppenjan, & Mayer, 2013).

Thus, apart from the linear and rational policy view that seems to prevail within innovation studies (Flanagan & Uyarra, 2016; Flanagan et al., 2011; Karlsen & Larrea, 2014a; Morlacchi & Martin, 2009), there are other views that have a different understanding of not only the policy process and the policy world, but also the role of the policy analyst. As happens with innovation studies and innovation policy rationales, the way the policymaking process is perceived influences not only policymaking, but also the part that knowledge is believed to play in such processes, and thus, how policy analysis is approached and developed.

Enserink et al. (2013a) beautifully illustrate the difference between approaches to policy analysis. Policy analysis 'needs to bridge the gap between science and action' (p. 14); on a continuum with science at one end and action at the opposite end, the balance can tilt towards one side or the other. In other words, policy analysis can be carried out by *accommodating policymaking to science*, leaning towards the primacy of 'scientific' knowledge (rationalist or technocratic accommodation); or it can be carried out by *accommodating science to policymaking*, leaning towards more useable knowledge (based on constructivism, pragmatism or relativism).

To give a general, inclusive and action-orientated definition, we could say, in the words of Dryzek (2006), that 'policy analysis encompasses a variety of activities concerned with the creation, compilation, and application of evidence, testimony, argument, and interpretation in order to examine, evaluate, and improve the content and process of public policy' (p. 190). Policy analysis can have different goals, such as problem-solving, reducing complexity by providing scientific knowledge, fostering democracy, empowerment, advice-giving, promoting dialogue, contributing to policy formulation or providing evidence-based policy analysis (Enserink et al., 2013; James & Jorgensen, 2009). Hence, the activities required for policy analysis also vary according to the goal it aims to achieve: it may involve generating scientific knowledge, translating that

knowledge into policy design, analysis and debate of values and arguments behind policy problems, strategic advising, giving voice to the unheard or facilitating spaces for negotiation (Mayer, van Daalen, & Bots, 2013).

The diversity of approaches and ways of looking at the policy phenomena and understanding the aim and role of research developed in policy sciences literature does not seem to be sufficiently reflected in the way policymaking is approached and analysed in most innovation literature. In our view, this has implications for the epistemic, normative and practice-related challenges to a critical policy scholarship posed by Morlacchi and Martin (2009). Thus, regional innovation policy literature and practice could benefit from the introduction of ideas, views, frames and analysis approaches that have been developed in other fields.

Specifically, we argue that interpretive, deliberative and relational approaches to policy analysis warrant further exploration with an eye to contributing to a critical policy scholarship in innovation studies. Interpretive ideas and approaches can not only help provide a better understanding of the object of study and better capture the complexities of the policy field, but also contribute to better innovation policymaking.

4. Interpretive, deliberative and relational approaches to policy analysis

By interpretive policy analysis, we mean research based on interpretive epistemology. This family of research approaches, which emerged in the 1990's as a critique of mainstream positivist policy analysis, has been given several names, including post-positivism or social constructivism; and the argumentative, discursive, linguistic or communicative turn (Howlett et al., 2009; Pérez-Lejano, 2013). It comprises many approaches, including frame analysis, hermeneutics, structuralism, discourse analysis, action research, critical perspectives and language or communicative approaches.

This movement has three major characteristics: (1) the belief that ‘instrumental rationality’ is ineffective for complex systems; (2) the argument in favour of participatory or deliberative policy analysis and policymaking approaches; and (3) the need for policy analysis to be context-based (de Leon & Vogenbeck, 2007). In a more general sense, what all these approaches have in common is their focus on meaning and interpretation (Wagenaar, 2011). Meaning is central to interpretive research. Meaning is situated and cannot be studied in an abstract way, it needs to be analysed within the context where it is given; in other words, knowledge comes from concrete situations (Innes & Booher, 2010; Schwartz-Shea & Yanow, 2012; Wagenaar, 2011). Moreover, from an interpretivist viewpoint, there is no such thing as an objective neutral researcher. As explained by Wagenaar (2011), actions constitute the data of social sciences, and actions are not mere behaviours, but behaviour with intentions. Thus, the way knowledge about such actions is acquired also requires interpretation.

Interpretive policy analysis scholars argue for such approaches based on efficiency-related and normative reasoning. Indeed, their value lies in the fact that they are more sensitive to the messiness of the policy process and to what policymakers actually do (Fischer, 2007; Hajer & Wagenaar, 2003; Howlett et al., 2009), in their contribution to democratic decision-making (Howlett et al., 2009; Ingram & Schneider, 2006) and in their *fit* with the nature of policymaking and thus, contribution to it (Hajer & Wagenaar, 2003; Wagenaar, 2007, 2011).

As outlined by Wagenaar (2011), the issue of *fit* takes on central importance when it is situated in the sphere of intervention. Policy analysis, as an interventionist activity, must *fit* with the nature of the reality that it is analysing. Interpretive approaches are better able to grasp and act upon complex uncertain contexts and thus, *fit* better with the nature of today’s political organization. The influential work of Hajer and Wagenaar (2003) points to three elements that research needs to have in order to fit the complex nature of the network society: interpretation, practice and deliberation. Research must be based on interpretive grounding and methodologies, since construction of meanings is inherent to the everyday policy world. It should also be action-

orientated, since policymakers need to make use of practical judgement in concrete situations and policy analysis needs to be helpful in those specific and practical circumstances. Research should also include or foster deliberation or mutual inquiry and assess the relevance or usefulness of knowledge in interaction.

In addition to the general viewpoint of this group of scholars, the way they conceive policymaking and policy analysis, and their conception of the role of the policy analyst (with which we agree), we believe that some of the specific concepts, ideas and approaches developed by them merit more thorough consideration. These provide not only insights which make it possible to gain a better grasp of what happens in policymaking, but also tools to operate in such a world. The selection is not random or exclusively theory-based, quite the opposite. They have been selected because they are concepts or ideas that have helped us make sense of our lived experience in policy and research environments; and thus, we believe that they can offer conceptual and analytical insights for research and specific approaches to support innovation policy practice. We are aware that by taking concepts sometimes informed by different epistemologies, we are to a certain extent engaging in 'epistemological bricolage' (Freeman, 2007). We hope that the action-orientated nature of our work justifies such an act.

4.1. Meanings and 'ordering devices': frames and narratives

As Flanagan et al. (Flanagan & Uyarra, 2016; Flanagan et al., 2011) state, policies have *interpretive flexibility*, that is, policy actors have different interpretations of policy problems, instruments or policy action across time and space. Hence, it could be argued that analytic tools to capture those meanings or to take them into account when acting are required when doing policy analysis. Meaning analysis, frames and narratives offer such analytical tools.

Indeed, ideas have a key influence on policymaking. Different types of ideas such as world views or ideologies, principled beliefs and causal stories inform policymaking; and paradigms, discourse or frames, that is, sets of ideas, influence how actors interpret problems (Howlett et al., 2009). From a

constructivist point of view, which sees a policy as being (at least partly) its interpretation, the meaning that a policy has for policy actors is extremely important. The work of Deborah Yanow (1996) has been very influential in putting forward the importance of meanings in policymaking. For Yanow (1993), there are at least three communities of meaning in any policy situation: policymakers, implementing agents and target groups. However, these can also contain a variety of internal communities such as directors, street-level employees, etc., or many other relevant groups such as interest groups or 'silent voices'. In other words, there can be different communities of meaning which are framing or interpreting the policy and the policy issue differently. The researcher's task is to conduct a *meaning audit*, for which Yanow (2000) offers a concrete methodology. In brief, this entails discovering what the policy means to different groups in order to take steps that will help improve policymaking processes (Yanow, 2000).

Similarly, there are different concepts that have been developed in policy sciences literature to refer to 'interpretive schemata' (Hajer & Laws, 2006), that is, to those mechanisms that help people to reduce complexity and understand different situations. Frames and narratives are two such concepts or tools – 'ordering devices' (Hajer & Laws, 2006) – which researchers use to understand how policymakers do this.

It is not easy to say what frames are (Hajer & Laws, 2006). In a general sense, they can be thought of as 'interpretive schemes that selectively highlight aspects of the issue and introduce a specific perspective that then allows one to capture reality in a simpler manner' (Pérez-Lejano, 2013, p. 102). As explained by Laws and Hajer (2006), Schon and Rein (1996) describe four different ways of approaching frames: they can be seen (1) as 'an underlying structure'; (2) as a boundary that tells us what not to take into account; (3) as a scheme for interpreting events, giving them meaning and thus guiding actions; or (4) as a story that helps us define a problem and what to do about it. A frame would, in generic terms, be made up of the four aspects presented by the authors.

Although widespread and common in policy analysis, according to Wagenaar

(2011), the frame concept is mainly used in its interpretive sense, as a way of finding meanings, as equivalent to positions. For the author, what makes frames interesting is their action orientation. In other words, actors do not frame simply to cognitively organize the world, but to know how to act. Frames are, in Wagenaar's (2011) words, like 'road maps' (p. 364), tools that helps us make the leap from the representing world to the intervening world. As also explained by Wagenaar (2011), Rein (1983) suggests three applications for frames in policy analysis: a) *frame criticism*, which consists of focusing and clarifying implicit assumptions behind policies; b) *frame creation*, which entails creating alternative frameworks of action to existing ones; and c) *redefinition and integration of frames*, which involves making the different frameworks of action compatible.

In real practice, frame analysis can be useful for dealing with policy controversies for example. Disagreements can be resolved by looking at the facts. But in situations where it is interpretive schemes that are colliding, a resolution cannot be found by examining facts or through arguments (Schon & Rein, 1994, cited by Wagenaar, 2011). In such disputes, situations have to be shaped by being in them; there is a need for *reframing* (Rein, 2006), for reflection-in-action, for creating new modes of action. Thus, the frame concept provides both an analytical tool for understanding policy actors, and an intervention tool for contributing to policy development.

Stories or narratives are also ordering devices for sense-making (Fischer & Mandell, 2012; Pérez-Lejano, 2013), and they can moreover be regarded as tools for change. The 'argumentative turn', which considers policymaking and policy analysis to be mainly about creating arguments (Fischer, 2007; Pérez-Lejano, 2013; Stone, 1989; van Eeten, 2007), posited the importance of stories, arguments or narratives in policymaking and policy analysis. Stories are a structuring device for relationships, as they organize people or communities around discourses (Pérez-Lejano, 2013). In other words, stories are used to capture the support for policy issues or actions, while they also organize coalitions or networks around these issues. Policy narratives help actors gain

understanding, since people make sense of the world by finding satisfactory interpretations, and the way to do this is by creating coherent narratives about situations (Pérez-Lejano, 2013; Stone, 1989). Policymakers also learn by listening and telling stories, and according to Bevir (2011), what a policy analyst contributes is precisely stories, regardless of their scientific expertise or data, stories of how people in certain situations acted and may act. Storytelling, or collective construction of shared narratives, can also be a central vehicle for consensus building (Hajer & Laws, 2006), or as shown by Goldstein et al. (2013), for enhancing resilience in communities, fostering critical learning and coordination.

In short, stories or narratives are important as a sense-making device for actors and researchers, as a mobilizing device, as a way of understanding policy practice and actions, as a change strategy or as researchers' tool for influencing policy or for policy learning.

4.2. Policy as practice

In Section 3, it was noted that the policymaking process is a complex interaction of institutions, networks, ideas and choices (Cairney, 2013). From recognition of a policy problem to its inclusion in the policy agenda, the formulation of policies and tools, and implementation of such policies, every 'stage' entails a myriad of interactions, perceptions or power plays (Howlett et al., 2009; Jann & Wegrich, 2007; Pülzl & Treib, 2007; Sidney, 2007). However, there is also a concept that helps provide a better understanding of the real life of policies, considering them to be an emergent property that breaks up the action–thinking or formulation–implementation dichotomies (Hajer & Wagenaar, 2003): *practice*, or the everyday work of policymakers.

The practice turn in policy sciences includes a different array of approaches and rationales for analysing the everyday work of policymakers, which builds upon the tradition of implementation or street-level studies (Freeman et al., 2011; Laws & Hajer, 2006). Authors such as Hajer and Wagenaar (2003), Bevir and Rhodes (2003) and Flyvbjerg (2001) have proposed practice as the unit of analysis or starting point for studying policy, governance and politics

(Flyverbom, 2011). Practice is the concept that gives meaning to evidence and policy: evidence is either derived from practice or it is designed to inform it; furthermore, policy is made to order practice (Freeman et al., 2011).

Practice can be seen, understood and approached in different ways – e.g. just doing, *habitus*, socially established activity – as Wagenaar and Cook (2003) describe in their exhaustive analysis of this concept. But in general terms, practice refers to the daily work of policymakers. It is in the everyday, in the specific moments and contexts where actors have to cope with policy dilemmas, uncertainty, ambiguity, conflicting values and work pressures; when they have to make sense of the changes and reinterpret them, when they have to act, adapt and learn. It is in the everyday that policymakers have to deal with such tensions and it is when and how policy is enacted (Laws & Hajer, 2006). As illustrated by Wagenaar (2004) in his analysis of a public official, even in a seemingly regulated administrative job, uncertainty and ambiguity are the common elements that practitioners have to cope with, and general principles have to be translated into particular situations. In such circumstances, general knowledge is not enough, actors need practical reason or judgement, *phronesis*, the virtue that helps link the general with the particular (Flyvbjerg, 2001).

From Freeman et al. (2011) and Hajer and Wagenaar (2003), we learn that practice integrates knowledge, action and norms. Practices are actions, they involve doing things, and it is by doing things or acting upon the world that people acquire knowledge about it. These actions are socially informed, there is some kind of interaction with others or with objects: it is in public processes where people act and learn about the world. Practice is also norms because it needs to be understood as such by others in order to be considered practice. It can thus be seen as ‘the enactment of institutions’, since it entails repetition, norms, routines. Hence, it is partly a repetition, but also partly innovation, since practice is to some extent reinvented in each particular situation. Practice is also knowledge, since it reproduces some previous knowledge, and thus, it must be learnt. What is more, practice is also political, it is inherently linked to the exercise of power: even a meeting is political since it entails elements such

as exclusion (Freeman et al., 2011).

Thus, the analysis of practice reconfigures the understanding of agency and institutions, breaking up the actor–structure dichotomy by viewing them as bringing each other into being (Freeman et al., 2011; Hajer & Wagenaar, 2003). It also focuses attention on certain elements which constitute policies, ‘mundane’ things such as artefacts, roles or objects (for example, meetings). Practice posits the importance of action in policymaking and policy analysis, since it is based on the idea that ‘knowledge, knowledge application and knowledge creation cannot be separated from action; that acting is the high road to knowing’ (Hajer & Wagenaar, 2003, p. 20). It brings the importance of practical judgement into policy analysis and lends importance to thick description as a way of focusing on what practitioners really do (Freeman et al., 2011; Hajer & Wagenaar, 2003). Additionally, it sets out the importance of micro-practices in policymaking. As Wagenaar (2011) puts it: ‘microrationalities of individual actors frustrate the macro-rationality of collective problem solving’ (p. 366), and practice can explain how policies may stagnate, how awkward consequences may emerge because target groups adapt programmes to their needs, or why programmes fail because the concerns of target groups are not taken into consideration in practice or the institutional routines that reproduce them.

4.3. The relational and collaborative dimension in policymaking and policy analysis and the central role of dialogue

As introduced in Section 1, there are several lines of reasoning in innovation literature that call for collaboration, horizontal modes of governance, bottom-up strategy development and interactive learning. With varying degrees of emphasis, these lead to the promotion of meeting spaces among different actors. Collaborative approaches to policy analysis provide methodologies that focus on the development of such spaces and offer insights with regard to research that focuses on the organization of such meeting spaces among actors, as called for by Palshaugen (2014).

Indeed, in addition to the specific arguments linked to the field of innovation policy, the complexities of policymaking, the interdependence of actors in handling complex problems and the need to include different kinds of knowledge in the policy process all demand collaborative, participatory and deliberative methods of policymaking and policy analysis (Goodin et al., 2006; Hajer & Wagenaar, 2003). In the words of Hajer and Wagenaar (2003), policymaking 'is not simply about finding solutions for pressing problems, it is as much about finding formats that generate trust among mutually interdependent actors' (p. 12).

According to Hajer and Laws (2006), the idea of organization by cooperation in policymaking or governance has had an impact on much of the policy sciences literature. Different literature on consensus building, negotiation, mediation, conflict resolution and collaborative planning has been concerned with how cooperation or a foundation for exchange can be fostered and maintained; and how differences or conflicts among diverging visions, histories or organizational identities can be handled.

These approaches, which Wagenaar (2011) includes (although not strictly referring to the same thing) under the family of *dialogical approaches to meaning* and currently *relational approaches* or *second wave of interpretive policy analysis* (Wagenaar & Bartels, 2016), are better placed to aid policymaking in that their action orientation and their *aid-to-action* (Wagenaar, 2011) particularly meet the needs of policymaking.

Dialogue is a central concept in all these approaches. The dialogue concept has been strongly developed in action research, especially in contemporary formulations of AR (Greenwood & Levin, 2007). Although there are more or less critical approaches to the concept of dialogue within the AR family, dialogue is central to all approaches, since they entail doing research *with* actors rather than *about* actors (Karlsen & Larrea, 2014a), and thus, meeting spaces between the two need to be built, generated or developed. It is in the nature of AR to create spaces with practitioners. These can be developed more informally

or carefully designed, such as the *dialogue conferences* proposed by Gustavssen (1992), or in a more long-term and less fixed form, the *agoras* put forward by Karlsen and Larrea (2014a).

In negotiation-based models, dialogue also plays a key role. Fischer and Mendell (2012) consider it necessary to enter into dialogue or transactional conversation in a way that tackles underlying assumptions and leads conflict to (temporary) consensus. Ansell and Gash (2008) build an interesting contingency model based on a meta-analytical study on the literature around consensus-orientated processes, or what they call 'collaborative governance'. This model captures the relevant variables, dimensions and issues in such consensus-orientated models. Dialogue is again at the heart of collaboration processes and is presented as a necessary factor or enabler which allows stakeholders to identify opportunities or which breaks down barriers to communication; or the enabler of trust-building, shared understanding or commitment to the process. The collaborative dialogue model presented by key authors Innes and Booher (Innes, 1995; 2004; Innes & Booher, 2003, 2010) also delves into such processes, identifying the requirements and the process by which spaces where different agents engage in deliberative processes lead to learning around working together to solve problems, and eventually, to changing structures that improve the adaptiveness and sustainability of systems and the generation of social and intellectual capital.

Strengthening existing approaches in innovation studies such as action research, and exploring or learning from other approaches thus offers the opportunity to gain insights which help foster the spaces that can generate more learning, collaboration and horizontal governance.

4.4. Constructivist approaches to policy learning

Hecló was the author who first introduced the idea of knowledge as an explanatory factor of policy change, as opposed to the previous conflict- and power-based theories (Bennett & Howlett, 1992; Grin & Loeber, 2007). Since then, the concept of policy learning has been widely used in public policy.

Nevertheless, there is no consensus or systematized knowledge regarding what policy learning is (Dunlop & Radaelli, 2013) and there are different ways of understanding it.

Since the seminal work by Bennet and Howlett (1992), which identifies different ways of understanding or using the concept based on the learning agents, the content and the results of the learning, several other works have tried to systematize or classify divergent uses of learning in policy literature. For example, Dunlop and Radaelli (2013) identify four approaches: reflexivity, the epistemic school, the bargaining–pluralist approach and the institutional mode, each of them with a different understanding of what learning entails, different perspectives when looking at it and different assumptions about how preferences are formed. Along similar lines, Gilardi and Radaelli (2012) categorize different understandings as instrumental learning, political learning, symbolic learning or reflexive social learning. Freeman (2007) classifies different ways of understanding knowledge and learning as (a) a rationalist approach, in which knowledge is instrumental to the policy process; (b) an institutionalist approach, which sees learning as incremental and evolutionary, dependant on previous beliefs; and (c) a constructionist approach, which considers learning to be collective, interactive and something that begins with practice.

The constructionist approach to learning appears to be virtually absent from the innovation literature with regard to policy learning (one exception being, for example, Karlsen & Larrea, 2016). To borrow the words of Freeman (2006) and Grin and Loeber (2007), it is ‘the way we think about learning which determines how well we do it’ (Freeman, 2006, p. 369) and ‘perhaps more than learning itself, it is our conception of learning that needs urgent attention’ (Wenger 1998, 9; cited by Grin and Loeber, 2007).

Grin and Loeber (2007) report a shift towards collective conceptions of learning, the introduction of relational perspectives of knowledge construction and constructivist interpretive methodologies in policy learning analysis since the seminal work of Bennet and Howlett (1992). They argue for constructionist

approaches to policy learning, specifically to contribute to theories of governance.

Fostering policy learning that enables changes in governance, is, as stated previously, one of the elements highlighted in systemic or evolutionary approaches to innovation policy. Indeed, changes in governance require changes in practices, and changes in practices require learning. As Bevir (2011) and Rhodes (2012) suggest, patterns of governance are explained by the different practices influenced by traditions and beliefs, which change in response to certain dilemmas that question those beliefs. Such changes involve, as Loeber et al. (2007) put it (although in the context of promoting sustainable development), a learning that 'is not only about ideas, but also about the power dimensions involved in the envisioned transformations' (Loeber et al., 2007, p. 84). They involve institutional changes and thus, they require a type of learning that makes self-evident assumptions explicit. This type of learning is not just rational, mechanistic or instrumental (Freeman, 2007; Freeman, 2006; Gilardi & Radaelli, 2012), a view that seems to prevail in the approaches to learning found in the innovation literature.

In said constructionist approach, Loeber et al (2007) highlight the importance of feedback mechanisms, of bringing the differences and tacit assumptions of actors to light, promoting reflection about one's own role in problems and facilitating system thinking as methods of enabling a social learning that stimulates institutional changes. With this view, we can also include Fisher and Mandell's (2009, 2012) proposed *transformative learning*, which has a strong critical approach. From their perspective, a policy analyst should be a facilitator of transformative learning, a *transformative policy analyst*. Facilitating social learning is, therefore, at the heart of the analysts' work. Like others along the same lines, this approach focuses on double-loop learning (Argyris & Schön, 1996), a learning centred on tacit assumptions. The role of the analyst is to show and contest different interpretive frameworks behind any policy problem through methods of conflict. Therefore, Fisher and Mandell (2009, 2012) propose a method that involves first a phase of 'narrative dialogue', where actions or problems are described or narrated, followed afterwards by a

deliberative process that confronts the problems.

Returning to the field of innovation, the approach to policy learning presented by Karlsen and Larrea (2014a, 2014b; 2016) is very much in line with the view of researchers as facilitators of transformative learning. They posit the importance of debates about ideological positions as a condition for policy learning to happen (Karlsen & Larrea, 2014b), and argue that a combination of changes in the mental frameworks of actors and changes in specific programmes contributes to social learning in the long term (Karlsen & Larrea, 2016). The researcher is positioned as a facilitator of such learning processes.

5. Concluding remarks

As discussed in this paper, there are several voices in innovation studies that have raised awareness of issues related to what Morlacchi and Martin (2009) identify as the challenges of policy scholarship in the normative, epistemic and practical dimensions. Specifically, the paper has focused on two weaknesses identified by scholars that have implications for the impact of innovation policy studies on regional innovation policymaking: the limited comprehension of real policymaking and a lack of attention to 'how' to foster aspects that are related to the aims that current innovation policy rationales propose – e.g. learning and governance.

The current approaches in innovation policy studies that primarily influence regional innovation policy thinking don't seem to be (at least strongly) influenced by the divergent theories regarding the policy process developed within the policy sciences literature, which take in different views on looking at policies and policymaking, as well as policy analysis. Following on from this, this paper contends that interpretive policy analysis approaches do offer insights to not only help better understand the complex world of policymaking, but also to conduct a policy-relevant policy analysis. Concepts, ideas and approaches such as frames or narratives, the practice perspective, 'dialogical approaches to meaning' (Wagenaar, 2011) and constructivist approaches to policy learning provide tools to support policymaking through research. We believe that such

concepts, their empirical applications and the possibilities of specific research approaches related to them within the field of innovation policy warrant further exploration.

In conclusion, there is quite a solid community of action researchers in the innovation field that can contribute to the equilibrium between different components of innovation research through its critical perspective and its action orientation. Concretely, we know from our own experience that the approach developed by scholars around 'action research for territorial development' (Estensoro & Larrea, 2016; Karlsen & Larrea, 2014a, 2014b, 2016) places the researcher, borrowing the words of Hajer and Wagenaar (2003), 'in the "mud" of policy practice, trying to assist in the discovery of new policy options and the formulation of compelling arguments' (p. 19) and offers a good alternative for carrying out innovation policy analysis that contributes to policymaking in ways other than traditional policy analysis approaches. An alternative way, in our view, which is more suited to capture the difficulties of developing soft instruments and to helping build them in the increasingly complex field of innovation policy.

Acknowledgments

I wish to thank my PhD supervisor, James R. Wilson, and Miren Larrea, Silvina Romano, Susana Franco, Patricia Canto, Miren Estensoro and Jon Mikel Zabala-Iturriagagoitia for their comments on this paper or earlier versions of this work, and for their invaluable support and contribution to its development. I also wish to acknowledge the insightful comments and suggestions made by its reviewer.

This paper has been financially supported by SPRI, Basque Business Development Agency.

References

- Ansell, C., & Gash, A. A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, 18(4), 543–571.
- Aranguren, M. J., & Larrea, M. (2011). Regional Innovation Policy Processes: Linking Learning to Action. *Journal of the Knowledge Economy*, 2(2), 569–585.
- Aranguren, M. J., Magro, E., & Wilson, J. R. (2016). Regional competitiveness policy evaluation as a transformative process: From theory to practice. *Environment and Planning C: Government and Policy*.
- Aranguren, M. J., Navarro, M., Wilson, J. R., & Wilson, J. R. (2015). *From Plan to Process : Exploring the Leadership Implications of RIS3* (Orchestra Working Paper Series in Territorial Competitiveness) (Vol. R01).
- Aranguren, M. J., & Wilson, J. R. (2014). Territorial Competitiveness. *Boletín de Estudios Económicos*, LXIX, 517–533.
- Argyris, C., & Schön, D. a. (1996). *Organizational Learning II: Theory, Method and Practice*. Reading: Addison-Wesley.
- Arnold, E., Boekholt, P., Deiacó, E., McKibbin, S., Simmonds, P., & Stroyan, J. (2002). *The Governance of Research and Innovation An international comparative study*. Technopolis Group. Retrieved from http://in3.dem.ist.utl.pt/master/03itt/lec_2_4_b.pdf
- Bennett, C. J., & Howlett, M. (1992). The lessons of learning : Reconciling theories of policy learning and policy change. *Policy Sciences*, 25(3), 275–294.
- Bevir, M. (2011). Governance as Theory, Practice, and Dilemma. In *The SAGE Handbook of Governance* (pp. 1–16). London: SAGE Publications.
- Borrás, S. (2008). The Widening and Deepening of Innovation Policy : What Conditions Provide for Effective Governance ? [Draft Version]. *Europe-Latin America Conference on Science and Innovation Policy*, 1–23.
- Borrás, S., & Edquist, C. (2016). Conceptual Underpinnings for Innovation Policy Design – Indicators and Instruments in Context. Presented at OECD Blue Sky Conference III, Gent, Belgium.
- Borrás, S., & Jordana, J. (2016). When Regional Innovation Policies Meet Policy Rationales and Evidence: A Plea for Policy Analysis. *European Planning Studies*, 0(April), 1–21.
- Cairney, P. (2013). Standing on the Shoulders of Giants: How Do We Combine the Insights of Multiple Theories in Public Policy Studies? *Policy Studies Journal*, 41(1), 1–21.
- Cairney, P., & Heikkila, T. (2014). A comparison of theories of the policy process. In P. a. Sabatier & C. Weible (Eds.), *Theories of the Policy Process* (pp. 363–389). Westview Press.

- Chaminade, C., & Edquist, C. (2010). Rationales for Public Policy Intervention in the Innovation Process: Systems of Innovation Approach. In R. E. Smits, S. Kuhlmann, & P. Shapira (Eds.), *Innovation policy – theory and practice. An international handbook*. (pp. 95–119). Chentelham: Edward Elgar Publishing.
- de Leon, P., & Vogenbeck, D. M. (2007). The Policy Sciences at the Crossroads. In F. Fischer, G. J. Miller, & M. S. Sidney (Eds.), *Handbook of Public Policy Analysis: Theory, Politics and Methods* (pp. 3–14). Boca Ratón: CRC Press.
- Dotti, N. F. (2014). *Literature Review on territorial innovation models , geography of research and policy innovations* (Greatpi Working Paper No. 1). Brussels.
- Dryzek, J. S. (2006). Policy Analysis as Critique. In M. Moran, M. Rein, & R. E. Goodin (Eds.), *The Oxford Handbook of Public Policy* (pp. 190–203). New York: Oxford University Press.
- Dunlop, C. A., & Radaelli, C. M. (2013). Systematising Policy Learning: From Monolith to Dimensions. *Political Studies*, 61(3), 599–619.
- Edler, J., Kuhlmann, S., & Smits, R. (2003). New governance for innovation. The need for horizontal and systemic policy co-ordination. *Fraunhofer ISI Discussion Papers Innovation System and Policy Analysis*, (2/2003).
- Edquist, C. (2011). Desing of innovation policy through dianostic analysis: identification of systemic problems (or failures). *Industrial and Corporate Change*, 20(6), 1–29.
- Enserink, B., Koppenjan, J. F. M., & Mayer, I. S. (2013). A policy sciences view on policy analysis. In W. A. H. Thissen & W. E. Walker (Eds.), (Vol. 179, pp. 11–41). Springer US.
- Estensoro, M., & Larrea, M. (2016). Overcoming policy making problems in smart specialization strategies: engaging subregional governments. *European Planning Studies*, 24(7), 1319–1335.
- Fagerberg, J., Landström, H., & Martin, B. R. (2012). Exploring the emerging knowledge base of “the knowledge society.” *Research Policy*, 41(7), 1121–1131.
- Fagerberg, J., & Verspagen, B. (2009). Innovation studies-The emerging structure of a new scientific field. *Research Policy*, 38(2), 218–233.
- Fischer, F. (2007). Deliberative Policy Analysis as Practical Reason: Integrating Empirical and Normative Arguments. In F. Fischer, G. J. Miller, & M. S. Sidney (Eds.), *Handbook of Public Policy Analysis: Theory, Politics and Methods*. Boca Ratón: CRC Press.
- Fischer, F., & Mandell, A. (2009). Transformative Learning through Deliberation: Social Assumptions and the Tacit Dimension. In F. Fischer (Ed.), *Democracy and Expertise: Reorienting Policy Inquiry*. Oxford: Oxford University Press.

- Fischer, F., & Mandell, A. (2012). Transformative Learning in Planning and Policy Deliberation: Probing Social Meaning and Tacit Assumptions. In F. Fischer & Herbert Gotweiss (Eds.), *The Argumentative Turn Revisited*. Durham: Duke University Press.
- Flanagan, K., & Uyarra, E. (2016). Four dangers in innovation policy studies – and how to avoid them. *Industry and Innovation*, 2716(March), 1–12.
- Flanagan, K., Uyarra, E., & Laranja, M. (2011). Reconceptualising the “policy mix” for innovation. *Research Policy*, 40(5), 702–713.
- Flyvbjerg, B. (2001). *Making Social Science Matter*. *Social Science* (Vol. 23). <http://doi.org/10.1177/109821400202300116>
- Flyverbom, M. (2011). Introduction: hybrid networks and political domains. In *The Power of Networks: Organizing the Global Politics of the Internet*. London: Edward Elgar Publishing.
- Freeman, R. (2006). Learning in Public Policy. In M. Moran, M. Rein, & R. E. Goodin (Eds.), *The Oxford Handbook of Public Policy* (pp. 367–388). New York: Oxford University Press.
- Freeman, R. (2007). Epistemological Bricolage: How Practitioners Make Sense of Learning. *Administration & Society*, 39(4), 476–496.
- Freeman, R., Griggs, S., & Boaz, A. (2011). The practice of policy making. *Evidence & Policy: A Journal of Research, Debate and Practice*, 7(2), 127–136.
- Gilardi, F., & Claudio M. Radaelli. (2012). Governance and Learning. In D. Levi-Faur (Ed.), *Oxford Handbook of Governance* (pp. 155–168). Oxford: Oxford University Press.
- Goldstein, B. E., Wessells, a. T., Lejano, R., & Butler, W. (2013). Narrating Resilience: Transforming Urban Systems Through Collaborative Storytelling. *Urban Studies*, 52(May).
- Goodin, R. E., Moran, M., & Rein, M. (2006). The Public and Its Policies. In M. Moran, M. Rein, & R. E. Goodin (Eds.), *The Oxford Handbook of Public Policy* (pp. 3–35). New York.
- Greenwood, D. J., & Levin, M. (2007). *Introduction to Action Research. Social Science for Social Change* (Second). Thousand Oaks (California): SAGE Publications.
- Grin, J., & Loeber, A. (2007). Theories of Policy Learning: Agency, Structure, and Change. In F. Fischer, G. J. Miller, & M. S. Sidney (Eds.), *Handbook of public policy analysis* (pp. 201–219). London: Taylor & Francis.
- Gustavsen, B. (1992). *Dialogue and Development: Theory of Communication, Action Research and the Restructuring of Working Life*. (T. S. C. for W. Life, Ed.). Assem: Van Gorcum.
- Hajer, M. A., & Laws, D. (2006). Ordering through Discourse. In M. Moran, M. Rein, & R. E. Goodin (Eds.), *The Oxford Handbook of Public Policy* (pp. 251–268). New York: Oxford University Press.

- Hajer, M. A., & Wagenaar, H. (2003). *Deliberative Policy Analysis: Understanding Governance in the Network Society*. Cambridge: Cambridge University Press.
- Howlett, M., Ramesh, M., & Perl, A. (2009). *Studying Public Policy: Policy Cycles and Policy Subsystems*. *Policy* (Vol. 2nd).
- Ingram, H., & Schneider, A. L. (2006). Policy analysis for democracy. In M. Moran, M. Rein, & R. E. Goodin (Eds.), *The Oxford Handbook of Public Policy* (pp. 169–189). New York: Oxford University Press.
- Innes, J. E. (1995). Planning Theory's Emerging Paradigm: Communicative Action and Interactive Practice. *Journal of Planning Education and Research*, 14(3), 183–189.
- Innes, J. E. (2004). Consensus Building: Clarifications for the Critics. *Planning Theory*, 3(1), 5–20.
- Innes, J. E., & Booher, D. E. (2003). Collaborative policymaking: governance through dialogue. In M. A. Hajer & H. Wagenaar (Eds.), *Deliberative Policy Analysis: Understanding Governance in the Network Society*. Cambridge: Cambridge University Press.
- Innes, J. E., & Booher, D. E. (2010). *Planning with complexity: An introduction to collaborative rationality for public policy*. New York: Routledge.
- James, T. E., & Jorgensen, P. D. (2009). Policy Knowledge, Policy Formulation, and Change: Revisiting a Foundational Question. *Policy Studies Journal*, 37(1), 141–162.
- Jann, W., & Wegrich, K. (2007). Theories of the Policy Cycle. In F. Fischer, G. J. Miller, & M. S. Sidney (Eds.), *Handbook of Public Policy Analysis: Theory, Politics and Methods* (pp. 43–62). Boca Raton: CRC Press.
- Karlsen, J., & Larrea, M. (2014). Interaction Between Research and Practice. *International Journal of Action Research*, 10(2), 125–128.
- Karlsen, J., & Larrea, M. (2014a). *Territorial Development and Action Research: Innovation Through Dialogue*. Farnham: Gower.
- Karlsen, J., & Larrea, M. (2014b). The contribution of action research to policy learning: The case of Gipuzkoa Sarean. *International Journal of Action Research*, 10(2), 129–155.
- Karlsen, J., Larrea, M., Wilson, J. R., & Aranguren, M. J. (2012a). Bridging the Gap between Academic Research and, 47(1), 122–138.
- Karlsen, J., Larrea, M., Wilson, J. R., & Aranguren, M. J. (2012b). Bridging the Gap between Academic Research and Regional Development in the Basque Country, 47(1), 122–138.
- Karlsen, J., & Miren Larrea. (2016). Moving context from the background to the forefront of policy learning: Reflections on a case in Gipuzkoa, Basque Country. *Environment and Planning C: Government and Policy*.

- Koschatzky, K., & Kroll, H. (2007). Which Side of the Coin? The Regional Governance of Science and Innovation. *Regional Studies*, 41(May 2015), 1115–1127.
- Laranja, M. (2012). Network governance of innovation policies: The Technological Plan in Portugal. *Science and Public Policy*, 39(5), 655–668.
- Laranja, M., Uyarra, E., & Flanagan, K. (2008). Policies for science, technology and innovation: Translating rationales into regional policies in a multi-level setting. *Research Policy*, 37(5), 823–835.
- Laws, D., & Hajer, M. A. (2006). Policy in Practice. In M. Moran, M. Rein, & R. E. Goodin (Eds.), *The Oxford Handbook of Public Policy* (pp. 409–424). New York: Oxford University Press.
- Loeber, A., Mierlo, B. van, Grin, J., & Leeuwis, C. (2007). The practical value of theory: conceptualising learning in the pursuit of a sustainable development. In A. E. J. Wals (Ed.), *Social learning towards a sustainable world. Principles, perspectives, and praxis* (pp. 83–97). Wageningen: Wageningen Academic Publishers.
- Lundvall, B.-A., & Borrás, S. (2005). Science, Technology, and Innovation Policy. In J. Fagerberg & D. C. Mowery (Eds.), *The Oxford Handbook of Innovation* (pp. 599–631). Oxford: Oxford.
- Magro, E., Navarro, M., & Zabala-Iturriagoitia, J. M. (2014). Coordination-mix: The hidden face of STI policy. *Review of Policy Research*, 31(5), 367–389.
- Magro, E., & Wilson, J. R. (2013). Complex innovation policy systems: Towards an evaluation mix. *Research Policy*, 42(9), 1647–1656.
- Martin, B. R. (2012). The evolution of science policy and innovation studies. *Research Policy*, 41(7), 1219–1239. 2
- Martin, B. R. (2016). R&D policy instruments – a critical review of what we do and don't know. *Industry and Innovation*, 2716(March), 1–20.
- Mayer, I. S., van Daalen, C. E., & Bots, P. W. G. (2013). Perspectives on Policy Analysis: A Framework for Understanding and Design. In W. A. H. Thisser & W. A. Walker (Eds.), *Public Policy Analysis* (Vol. 179, pp. 41–64). New York: Springer US.
- Mazzucato, M. (2016). From market fixing to market-creating: a new framework for innovation policy. *Industry and Innovation*, 23(2), 140–156.
- Morlacchi, P., & Martin, B. R. (2009). Emerging challenges for science, technology and innovation policy research: A reflexive overview. *Research Policy*, 38(4), 571–582.
- Nauwelaers, C., & Wintjes, R. (2002). Innovating SMEs and Regions: The Need for Policy Intelligence and Interactive Policies. *Technology Analysis & Strategic Management*, 14(2), 201–215.
- Navarro, M. (2009). Los sistemas regionales de innovación. Una revisión crítica. *Ekonomiaz*, 70(1), 24–59.

- OECD. (2005). *Governance of Innovation Systems. Volume 1: Synthesis Report*. Oecd. Paris: OECD Publishing.
- OECD. (2011). *Reviews of Regional Innovation: Regions and Innovation Policy*. Paris: OECD Publishing.
- Palshaugen, O. (2014). Dialogues in innovation: Interactive learning and interactive research as means for a context sensitive regional innovation policy. *International Journal of Action Research*, 10(2), 213–234.
- Pérez-Lejano, R. (2013). Postpositivism and the policy process. In X. Araral, Eduardo; Fritzen, Scott; Howlett, Michael; Ramesh, M; Wu (Ed.), *Routledge handbook of public policy*. New York: Routledge.
- Pülzl, H., & Treib, O. (2007). Implementing Public Policy. In F. Fischer, G. J. Miller, & M. S. Sidney (Eds.), *Handbook of Public Policy Analysis: Theory, Politics and Methods* (pp. 89–107). Boca Ratón: CRC Press.
- Rein, M. (1983). Value-Critical Policy Analysis. In D. Callahan & B. Jennings (Eds.), *Ethics, the Social Sciences, and Policy Analysis* (pp. 83–112). New York: Plenum Press.
- Rein, M. (2006). Reframing Problematic Policies. In M. Moran, M. Rein, & R. E. Goodin (Eds.), *The Oxford Handbook of Public Policy* (pp. 389–405). New York: Oxford University Press.
- Rhodes, R. A. W. (2012). Waves Of Governance. In *The Oxford Handbook of Governance*. Oxford University Press.
- Schon, D. A., & Rein, M. (1994). *Frame Reflection: Toward the Resolution of Intractable Policy Controversies*. New York: Basic Books.
- Schwartz-Shea, P., & Yanow, D. (2012). *Interpretive Research Design. Concepts and Processes. Routledge Series on Interpretive Methods*. New York: Routledge.
- Sidney, M. S. (2007). Policy formulation: design and tools. In F. Fischer, G. J. Miller, & M. S. Sidney (Eds.), *Handbook of Public Policy Analysis: Theory, Politics and Methods*. Boca Ratón: CRC Press.
- Sotarauta, M., & Kosonen, K.-J. (2013). Customized Innovation Policy for Regions. *European Urban and Regional Studies*, 20(2), 258–274.
- Stone, D. A. (1989). Causal Stories and the Formation of Policy Agendas. *Political Sciences Quarterly*, 104(2), 281–300.
- Stone, D., Maxwell, S., & Keating, M. (2001). Bridging Research and Policy. In *UK Department for International Development* (pp. 1–50). Retrieved from <http://www2.warwick.ac.uk/fac/soc/pais/research/researchcentres/csgr/research/keytopic/other/bridging.pdf>
- The World Bank. (2010). *Innovation Policy. A Guide for Developing Countries*. Washington: The World Bank.
- Tödting, F., & Tripl, M. (2005). One size fits all?: Towards a differentiated regional innovation policy approach. *Research Policy*, 34(8), 1203–1219.

- Uyarra, E. (2007). Key Dilemmas of Regional Innovation Policies. *Innovation: The European Journal of Social Science Research*, 20(3), 243–261.
- Uyarra, E., & Flanagan, K. (2009). La relevancia del concepto “sistema regional de innovación” para la formulación de la política de innovación. *Ekonomiaz*, 70(1er cuatrimestre), 150–169.
- Uyarra, E., & Flanagan, K. (2010). From regional systems of innovation to regions as innovation policy spaces. *Environment and Planning C: Government and Policy*, 28(4), 681–695.
- van Eeten, M. J. G. (2007). Narrative Policy Analysis. In F. Fischer, G. J. Miller, & M. S. Sidney (Eds.), *Handbook of Public Policy Analysis: Theory, Politics and Methods*. Boca Ratón: CRC Press.
- Wagenaar, H. (2004). “Knowing” the Rules: Administrative Work as Practice. *Public Administration Review*, 64(6), 643–665.
- Wagenaar, H. (2007). Interpretation and Intention in Policy Analysis. In F. Fischer, G. J. Miller, & M. S. Sidney (Eds.), *Handbook of Public Policy Analysis: Theory, Politics and Methods*. Boca Ratón: CRC Press.
- Wagenaar, H. (2011). *Meaning in Action: Interpretation and Dialogue in Policy Analysis*. Armonk (NY): M.E. Sharpe.
- Wagenaar, H., & Bartels, K. (2016). Relational Approaches to Policy Analysis. Retrieved January 8, 2017, from <https://ecpr.eu/Events/SectionDetails.aspx?SectionID=578&EventID=95>
- Wagenaar, H., & Cook, N. (2003). Understanding policy practices: action, dialectic and deliberation in policy analysis. In H. Wagenaar & M. A. Hajer (Eds.), *Deliberative policy analysis*: (pp. 139–171). Cambridge: Cambridge University Press.
- Yanow, D. (1993). The communication of policy meanings: Implementation as interpretation and text. *Policy Sciences*, 26(1), 41–61.
- Yanow, D. (1996). *How does a policy mean? Interpreting policy and organizational actions*.
- Yanow, D. (2000). *Conducting Interpretive Policy Analysis. Conducting Interpretive Policy Analysis*. Thousand Oaks (California): SAGE Publications.

Orkestra-Basque Institute of Competitiveness

Mundaiz, 50
20012 Donostia – San Sebastián
t. (+34) 943297327
f. (+34) 943279323



www.orquestra.deusto.es