

15 The Socio-political Use of Environmental Perception, Interpretation and Evaluation Research

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This chapter outlines a critical, reflexive research agenda for environmental perception, interpretation and evaluation research (PIE). Here, PIE refers to all those studies that explore the ways in which people perceive, interpret and value the natural and the cultural environment. If one takes this broad definition of PIE, one can state that much PIE has been conducted in Dutch academia in recent years. For example, at Wageningen University and Research Centre alone, several hundred studies have been published in the past 20 years (see e.g. Coeterier, 1995, 2000; Vries, 2008). Many of these studies were directly funded by governmental bodies, especially by the Dutch Ministry of Agriculture, Nature and Food Quality.

For my proposed outline for a critical and reflexive research agenda for PIE, I will describe seven possible uses of PIE in social and political practices. I will show that PIE can be used for (1) democratizing policy and decision-making processes, (2) evaluating policy, (3) managing and resolving conflicts, (4) supporting and constructing policies, (5) improving communication strategies, (6) deconstructing policy assumptions and (7) legitimizing existing policies and political action.

I deliberately use the word 'possible' because the described uses of PIE are not deduced from empirical research on the use of PIE, but are partly derived from insights from science and technology studies, sociology and anthropology of science, and governance studies. Therefore the list of potential uses should be read as a working hypothesis to be verified or falsified, or at least elaborated upon in upcoming reflexive PIE studies.

Another reason can be added to the above. It is impossible to predict whether or not the desired extra-academic effects of PIE will be achieved, since the effects are produced in a necessarily opaque and unpredictable context of use (Duineveld, Beunen, During, Assche & Ark, 2008). The 'effect' of scientific knowledge or the roles it will play in extra-academic practices depends on various scientific, social, administrative and political powers. Studies may be ignored, selectively used or have only a very indirect influence on extra-academic practices. These arguments might feed the scepticism of people who consider socio-scientific research, including PIE, useless. By outlining seven potential social-political uses

of PIE, I argue the opposite and at the same time stress the potential for abuse. First, however, I will elaborate on two important developments that frame the argument.

The need for a critical turn in science studies

Much research on the production and use (and misuse) of scientific knowledge has been conducted in the field of science and technology studies. I do not intend to contribute directly to this well-established field, but to borrow from it certain theories and concepts in order to explore their potential application in the analysis of PIE. This might sound odd – a bit like putting old wine in new bottles. However, I think that this is legitimized by two developments, one in the field of science and technology studies, the other within academia.

First, my ‘ruthless recycling’ is compatible with recent debates in science and technologies studies (STS) (see Biagioli & Galison, 1999; for an overview, see Pestre, 2004; Biagioli & Galison, 1999). Some more reflexive STS academics are starting to question the non-political and non-critical dimensions of their own discipline – actor-network theory being a case in point. Fuller (2000), analysing the trajectory of the Parisian STS school, argues: “Actor-network theory turns out to be little more than a strategic adaptation to the democratization of expertise and the decline of the strong nation-state in France over the past 25 years. . . .Insofar as actor-network theory has become the main paradigm for contemporary STS research, it reflects a field that dodges normative commitments in order to maintain a user-friendly presence.”

According to Fuller (ibid.), actor-network theory’s popularity in the field of STS is the result of the client-driven environment in which it is constituted; as a result it has created an “aversion to normative judgements and even an open antagonism to the adoption of ‘critical’ perspectives.” Pestre draws similar conclusions in her *Thirty Years of Science Studies: Knowledge, Society and the Political* (2004). She wraps up her historical overview of science studies with a plea for a critical turn in science studies, replaying the conceptual moves of the 1960s and 1970s. She argues that from the second half of the 1960s and the beginning of the 1970s, science studies was part of a social movement that was very critical of a science in which many “ . . . subscribed to the view that science was an institution in the service of the powers-that-be, that it was a socially authoritarian and elitist institution, that science was always-and-already ideological, and that it disguised the constructed parts of its knowledge claim by naturalizing them.”

In this chapter I will not engage any further in the disputes within the field of STS but will revitalize, with Pestre, the early critical stance regarding the use of scientific research. I will develop additional arguments for the critical and reflexive approach.

The second recent development this chapter links up with is the rise of what is referred to as ‘mode 2 knowledge production.’ Mode 2 refers to the kind of

knowledge that is explicitly policy-driven. It stands in contrast to ‘mode 1 knowledge production,’ which, in its ideal form, is driven by the goals and the questions of scientific disciplines (Gibbons, 1994). The rise of mode 2 knowledge is seen as part of a tendency in which scientific production is increasingly motivated by socio-political questions and objectives (Gibbons, 1994; cf. Veld, 2000; Hoppe, 2002; Latour, 1995, 2004). This tendency can be explained by recent developments in academic institutions. Lock and Lorenz (2007) examined how universities and research institutes increasingly commercialized. They state that: “[b]y now it is a commonplace to note that the great wave of ideological fashion in public policy – call it ‘commercialization,’ ‘privatization,’ ‘marketization,’ ‘liberalization’ or whatever you like – has also swept across the higher education and research sectors, with far-reaching consequences. Indeed, it looks as if we shall be stuck with it for a good while yet” (cf. Lorenz, 2006).

It is because of these mechanisms of commercialization (or ‘privatization,’ ‘marketization’ and ‘liberalization’) that I think it is more and more important to elaborate on the socio-political use and misuse of scientific/socio-scientific research. I will produce arguments for this in the following.

Six hypothetical socio-political uses of PIE

In his dissertation, Jacobs (2006: 31) gives an overview of different disciplines involved in PIE: “a wide variety of scientific disciplines using many different approaches.” One of these disciplines is environmental psychology, which studies human landscape preferences (ibid.; see e.g. Gifford, 1987; Kaplan, 1987). The methods used within environmental psychology are predominantly quantitative. Other disciplines are more qualitatively oriented, for example, human geography, in which people’s sense of place has been studied (Tuan, 1974, 1977; Flowerdew & Martin, 1997). Also within anthropology, qualitative studies focus on the interaction between people and their environment (Bender, 2002; Gable & Handler, 2003; Low & Lawrence-Zñiga, 2003). The main focus of anthropological PIE is, roughly speaking, on the meanings people attribute to their environment and the ways in which the environment constitutes people. According to Jacobs, historical disciplines can also be added to this brief list. Within these disciplines, scholars mainly focus on the historical interpretation of the environment, the evolution of ascribed meaning (e.g. Schama, 1995).

It is not necessary to elaborate any further on the types of PIE. Nor will I scrutinize and analyse various forms of PIE. The main focus of this chapter is not the content of various PIE studies (for an overview, see Jacobs 2006). Here, I will explore various socio-political uses of PIE. These types can be categorized in several ways. Though some suggest a division between the instrumental, strategic and conceptual uses of knowledge, and others between knowledge as problem solver, problem detector, accommodator and advocate (Turnhout, 2003: 19), I prefer not to introduce seemingly clear-cut categorizations. Instead, I will outline seven

hypothetical socio-political uses of PIE. Six of them will be presented in this section, the seventh in the following section. Other uses can be added, and some of the presented uses might be conceived differently by other authors. Other authors might give a different content to the categories, possibly overlapping with other classifications or supplementing them (cf. Flyvbjerg, 2001).

1. Democratizing policy and decision-making processes

The first and, in my opinion, most important potential use of PIE is democratization (cf. Jacobs & Kuijer, 2007). PIE can bring the multiplicity of interpretations and valuations of environments within the grasp of policy makers. It can also be used to include the opinions of other groups that are under-represented in a decision-making process. This kind of knowledge can be obtained by exploring the wishes of people and mapping their ideas about their environment or planned changes in it. After obtaining this knowledge, efforts can be made to attune policy to peoples' wishes: what do people think of X? Is there a need for more Y? If the knowledge produced by PIE is integrated in policies, one can speak of a form of democratization (Engelen & Sie, Dhian Ho, 2004).

2. Evaluating policy

There is an increasing demand within administrations for policy evaluations. According to van der Meer and Edelenbos (2006), this is a result of: "... an increasing emphasis on transparency, measurable results and accountability. Policy documents should specify clear goals, the attainment of which should be measured by unequivocal (and if possible quantitative) indicators. Policy makers should be held accountable for the results thus assessed." Evaluations are used for a range of purposes. They can be used to analyse whether the intended goals were achieved and whether policies made a difference, since a policy goal can also be achieved by means other than the policy itself. Evaluations can also be focused on the functioning and use of rules, instruments and policy documents. Because PIE can be used as an evaluation tool for those questions with regard to the opinions and desires (values, meanings) people have regarding their environment or upcoming changes in their environment, policy evaluation must be added to this list of potential uses of PIE.

3. Managing and resolving conflicts

PIE has the potential to tackle both latent and overt resistance against policy. Research can be done on the appreciation of proposed policies, and to explore potential resistance to new policy means and goals. This information can provide insight into the positive or negative attitudes people have towards these policies. These attitudes could, but do not necessarily indicate whether or not people will oppose the proposed plans (Ajzen, 2005). These plans could then be adapted in a relatively early stage, by for instance involving the stakeholders (visitors, local inhabitants, etc.) in the planning or decision-making process. PIE can also shed light on the knowledge people have about their environment and the values they

attach to it. By involving these values in the policy process, support might increase and potential opposition could be prevented.

4. Supporting and constructing policies

PIE can be used as a means to support and construct new policies. It can also be used to support the construction of policies or plans by exploring the values or problems that exist within a certain community, by for example taking into account places or things in the environment that are valued within that community. PIE can also be used to predict whether or not policy will have an effect; it can help us understand why a policy is or is not effective. Furthermore, it can be used to monitor a policy: is it still effective? Is it appreciated or not, and if so by whom? How can it be adjusted? (cf. Tiemeijer, 2006: 133). It might also be useful for the exploration of alternative policies by researching which policy option is likely to be the most effective (cf. *ibid.*: 134).

5. Improving communication strategies

Another potential use of PIE is to support and improve communication strategies. The outcomes of PIE can indicate how to construct a ‘message,’ how to create public awareness, how to persuade. Effective communication processes require knowledge regarding the interpretation of the environment (Woerkum, 2000).

6. Deconstructing policy presumptions

A slightly different potential use of PIE is deconstruction. The word deconstruction is a combination of ‘construction’ and ‘destruction,’ and it refers to the process in which constructions of reality are destructed and better constructions are introduced (Culler, 1983). For instance, in many policy reports it is argued that tangible heritage contributes to the qualities and identities of the landscape. This idea is a major argument of Dutch heritage policy. PIE has shown this assumption to be far too general and in many cases false (van Assche, 2004). Various studies have shown that people can ascribe completely opposite meanings and values to the landscape, constructing various, sometimes conflicting identities. Heritage is sometimes influential in this process, and sometimes it is not (*ibid.*). From PIE on heritage, the conclusion can be drawn that the discourse on the heritage values is underpinned by partly false arguments.

I will now introduce a seventh use of PIE. This use has never been explained in research proposals, papers or reports as a research objective, although it may well be the most frequently ‘applied’ use of PIE and perhaps the most dominant force behind it.

A critical account of the production and socio-political use of PIE

It would be quite plausible to draw the conclusion from this brief overview of six possible uses of PIE that the popularity of this kind of research can be

partly explained by its applications. Although most of these can be interpreted from a normative (democratic) stance as 'good,' there are some critical arguments against the production and use of PIE. I have derived these arguments partly from Bourdieu (1979, 1981a, 1981b, 1988, 2003). Another important source is Tiemeijer's *The Citizen's Secret: on State and Opinion Research* (Tiemeijer, 2006, translated by the author), in which he, partly inspired by for example Lacan, Bourdieu and Latour, tries to answer the question: what is the desirability of carrying out opinion research for the benefit of policy-making in a representative democracy? (ibid.: 546). Bourdieu's and Tiemeijer's arguments, both pro and contra opinion research, apply to PIE.

A good number of critiques can be labelled 'methodological concerns,' or 'concerns related to the question: does PIE actually represent people's opinions, values, meanings, emotions, etc?' Just like opinion research, the various forms of PIE cannot be completely representative. Some people do not respond to an interview/opinion poll or they answer 'don't know' or 'no opinion' (Tiemeijer, 2006: 417; Bourdieu, 1979). Another constraint on the representativity of PIE is the 'social desirability response bias' (Ganster, 1983; Presser, 1998; Randall, 1991). This concept refers to the tendency to answer questions in ways that are deemed socially desirable/acceptable. For example, people may be reluctant to give answers that could be perceived as unpopular or politically incorrect. 'Social desirability response bias' is an obstacle when trying to gain insight into what people actually think and desire. Besides, there is also a chance that people will try to manipulate the outcomes of PIE by "advocating a more extreme position than they actually hold in order to boost their side of the argument or give rapid and ill-considered answers in order to hasten the end of their questioning" (http://en.wikipedia.org/wiki/Opinion_poll).

I think it is perfectly arguable that these and other criticisms are valid for various types of PIE, especially when studying larger groups. However, I do not think that these are the most important counter-arguments concerning PIE and its uses. In my opinion, one should be much more critical about a seventh potential use of PIE, namely as a means to legitimize policy. In other words, those in power frequently use PIE as a tactic to sustain or increase their power, to legitimize their policies and to rhetorically increase public support for their policies (Tiemeijer, 2006: 345). These mechanisms are exposed in various studies on the use of knowledge in extra-academic practices (Veld, 2000). From these studies, the conclusion has been drawn that scientific knowledge is often used only as political ammunition to support new or old political decisions (Hoppe, 2002: 22). Haas (2004) firmly states that: "Power doesn't care about truth anyhow. Politicians don't want science; they want a justification for pre-existing political programs which are driven principally by political anticipations of gain (Miles 1998; Nelkin 1979)."

Those statements illustrate the revitalization of critical stances on the use of scientific research in the 1960s and 1970s, a revitalization I wish to rejoin here. In the late 1970s, the sociologist Bourdieu posited the idea that socio-scientific re-

search can be used to exercise political power. According to him: “. . . une bonne partie de ceux qui se désignent comme sociologues ou économistes sont des ingénieurs sociaux qui ont pour fonction de fournir des recettes aux dirigeants des entreprises privées et des administrations. Ils offrent une rationalisation de la connaissance pratique ou demi-savante que les membres de la classe dominante ont du monde social. Les gouvernants ont aujourd’hui besoin d’une science capable de rationaliser, au double sens, la domination, capable à la fois de renforcer les mécanismes qui l’assurent et de la légitimer” (Bourdieu, 1980: 27).

In his article ‘Public opinion does not exist,’ Bourdieu aimed specifically at opinion research: “The opinion poll is, at the present time, an instrument of political action; . . . The ‘public opinion’ which is stated on the front page of the newspapers in terms of percentages (60% of the French in favour of . . .) is a pure and simple artefact whose function is to conceal the fact that the state of opinion at any given moment is a system of forces, of tensions, and that there is nothing more inadequate than a percentage to represent the state of opinion. . . . One could even say that there is a tendency in the exercise of power towards its self-concealment as such, and that complete power is only realized when it is fully concealed. Stated simply, the politician who yesterday said ‘God is on our side’ today says ‘Public opinion is on our side’” (Bourdieu, 1979, also partly cited in: Tiemeijer, 2006: 387).

These quotes illustrate nothing less than Foucault’s ‘mutual constitution of power and knowledge.’ Power for Foucault is shorthand for the expression he generally uses: ‘relations of power’: “But there are ready-made models: when one speaks of power, people immediately think of a political structure, a government, a dominant social class, the master and the slave, and so on. I am not thinking of this at all when I speak of relations of power. I mean that in human relationships, whether they involve verbal communication . . . , or amorous, institutional, or economic relationships, power is always present: I mean a relationship in which one person tries to control the conduct of the other. So I am speaking of relations that exist at different levels, in different forms; these power relations are mobile, they can be modified, they are not fixed once and for all” (Foucault, 1997: 291–292).

According to Foucault, power is everywhere and it is exercised from different viewpoints and positions (Foucault, 1998: 93). Moreover, relations of power are always connected to a certain objective; they are intentional relations: “There is no power that is exercised without a series of aims and objectives” (ibid.: 95). It has to be stressed here that the word ‘power’ does not carry a negative connotation, in contrast to the everyday use. Power is neither good nor evil. It can be repressive as well as productive: power produces some discourses, realities, knowledge, values, subjects, etc. and makes others impossible by marginalizing or subjugating them (ibid.: 81–102, cf. Foucault, 1994).

The relationship between knowledge and power was recently studied by Flyvbjerg. He extensively studied a planning process from the perspective of power, strongly influenced by Machiavelli, Nietzsche and Foucault. His *Rationality and*

Power: Democracy in Practice is the result of detailed empirical research into planning practices in the city of Aalborg (Flyvbjerg, 1998). Aalborg's local administration received an award for its innovative long-term transportation plans for the inner city. These plans were said to have been developed in an innovative manner, involving new concepts, new strategies and new partners. However, Flyvbjerg's analysis did not underwrite this success. In his book he exposes the power strategies that various actors, often with opposing interests, used to attain their objectives. One of those strategies was the selective use of scientific knowledge and the conscious concealing or marginalizing of research that did not support their case. Flyvbjerg concludes from his study: "I already mentioned above Francis Bacon's dictum that knowledge is power. This dictum expresses the essence of Enlightenment thinking, 'Enlightenment is power,' and the more enlightenment – the more rationality – the better. The Aalborg study shows that Bacon is right; knowledge is power. But the study also shows that the inverse relation between power and knowledge holds and that empirically, as opposed to normatively, it is more important: 'Power is knowledge.' In this sense, the study stands Bacon on his head. It shows how power defines what gets to count as knowledge. It shows, furthermore, how power defines not only a certain conception of reality. It is not just the social construction of rationality that is at issue here; it is also the fact that power defines physical, economic, social and environmental reality itself" (Flyvbjerg, 2002).

The mutual constitution of power and knowledge (power produces knowledge, knowledge produces power) can be seen as inevitable and it applies to almost every kind of science, including PIE. This does not mean, however, that it is problematic by definition. I think it becomes problematic only when it leads to unfair, undemocratic practices, in which certain groups use the results of environmental PIE (as a form of knowledge) to legitimize their own values and exclude those of others (a form of power) (cf. Duineveld & Assche, 2006). An example from the Dutch context might illustrate a part these critiques (partly echoing Bourdieu's criticism of opinion polls).

In some studies on the experience of nature, researchers silently embed what nature is and what it looks like before they actually conduct their research. For example, the photos used in environmental psychology research to investigate people's preferences already represent a certain view on nature, one often dominated by ecologists' discourse. When using these photos as a research instrument, people's perceptions, interpretations and evaluations of nature are often overlooked – too few options are open, there are only predefined images of nature. In other words: one can only judge a predefined image/idea of nature; other images are excluded from the start (cf. Aarts, 1998). The inevitable outcome of these studies is that people value nature. Biased research tools produce biased outcomes. These outcomes are in perfect shape to legitimize existing or intended nature policy, suddenly 'supported by research.'

Take, for example, the following quotation from the Dutch board for the rural environment (Raad voor het Landelijk Gebied): "From recent research on the posi-

tion of nature, the conclusion can be drawn that people are very involved with nature. For many people, nature is an important value. . . . An active nature policy is therefore commonly accepted.” (<http://www.rlg.nl>, translated by the author). I argue that conclusions like these are based on false assumptions. Besides the skewed results stemming from the research design, there is the assumption that one can draw conclusions about a specific natural area from generic investigations of ‘nature.’ More elaborate studies are needed if one wants to legitimize a specific nature policy. One would at least need to answer such questions as what do people define as nature? When they desire an increase in nature, on what locations? How do they value nature compared to other ‘needs’ like housing? And what are their preferred instruments for realizing nature? (Duineveld & Beunen, 2006)

To tackle this and other problems connected to the use of PIE, social scientists working on PIE should become more aware of the contexts of knowledge production (the scientific field) and the way these contexts are shaped by academic and extra-academic powers. Below, in the final part of this chapter, I will try to translate the insights presented above into a tentative research agenda.

Notes for a research agenda

From the socio-political uses of PIE described above, the conclusion can be drawn that PIE is likely to be useful for various social, political and environmental issues. At the same time, some scepticism is justified. More detailed investigations into the socio-political use, both positive and negative, of PIE are definitely needed, also in our case study area, the Netherlands. This is why I will conclude this chapter with a brief outline of such studies.

The aim of the research advocated here is to verify, falsify and refine the seven features of PIE presented above. This research should focus on the production and use of PIE and can be seen as a form of what Bourdieu calls ‘reflexive sociology’ (Bourdieu & Wacquant, 1992). Elsewhere, Bourdieu speaks of ‘auto-analysis’ (Reed-Danahay, 2005) or ‘participant objectivation’ (Bourdieu, 2003), referring to the same kind of research. For Bourdieu, a reflexive sociology is a sociology that duplicates its scientific labour. It objectifies not only the social reality of others but also the researcher and his or her research. In a lecture delivered at a meeting of anthropologists (which explains his use of anthropologists’ vocabulary to make his point), he gives the following description: “By ‘participant objectivation,’ I mean the objectivation of the subject of objectivation, of the analysing subject – in short, of the researcher herself. . . . What needs to be objectivized, then, is not the anthropologist performing the anthropological analysis of a foreign world, but the social world that has made both the anthropologist and the conscious or unconscious anthropology that she (or he) engages in her anthropological practice – not only her social origins, her position and trajectory in social space, her social and religious memberships and beliefs, gender, age, nationality, etc., but also, and most importantly, her particular position within the microcosm of anthro-

pologists. It is indeed scientifically attested that her most decisive scientific choices (of topic, method, theory, etc.) depend very closely on the location she (or he) occupies within her professional universe, what I call the ‘anthropological field,’ with its national traditions and peculiarities, its habits of thought, its mandatory problematics, its shared beliefs and commonplaces, its rituals, values, and consecrations, its constraints in matters of publication of findings, its specific censorship, and, by the same token, the biases embedded in the organizational structure of the discipline, that is, in the collective history of the specialism, and all the unconscious presuppositions built into the (national) categories of scholarly understanding” (Bourdieu, 2003).

In other words, the reflexive anthropology Bourdieu is advocating aims to unveil and unravel the rules, assumptions, discourses and contexts that form a scientific field or discipline, and that influence the scientific practices of academics operating within them. These rules etc. enable the production of knowledge; simultaneously they are responsible for the blind spots that the researcher developed within a discipline or even for the blind spots of an entire discipline (cf. Asche & Verschraegen, 2008). This type of reflexive PIE I would like to propose as one of three types I am endorsing here. A second, interrelated type of reflexive experience will be directed at the ways in which socio-political power influences the production of scientific knowledge; the ways in which the research and its outcomes are modified by power relations between those who produce knowledge and those who financially enable or constrain its production. In relation to this type of research, questions like these could be asked: what kinds of PIE are financed and for what reasons? What kinds are not financed and for what reasons? How do the aims of an administration, government or political party influence the outcomes of a research project? Who gains and who loses, and by which mechanisms of power? (Flyvbjerg, 1998). A third type of reflexive PIE should examine the way the outcomes are used and misused in actual socio-political practices. This form does not focus on the way power relations influence the production of knowledge, as is the case in type two, but on the way knowledge becomes part of the context of power relations in extra-academic contexts, how it is used and for what purposes.

The three types of reflexive PIE will sometimes coincide in one study, and will often overlap. For now I can only express the hope that reflexive PIE will be conducted more often and that the outcomes will raise awareness among researchers and among those who enable and use their research. Unfortunately, my hope comes with a warning: one should be aware that reflexive PIE holds not only promises but also a risk. Reflexive studies might reveal to researchers that their results have become part of policy-legitimizing repertoire, that those results are used to spread elite values of ethnocentric archaeologists, landscape architects, ecologists, economists, bureaucrats, technocrats, politicians, etc.!

Therefore, to produce reflexive PIE, we need courage – courage to confront ourselves, our discipline, our colleagues, policy makers and politicians (on whose

money we are so dependent) with the ‘effects’ of our research. And these confrontations in turn might be risky, as they might not increase the popularity of reflexive researchers. In the worst case, people will be replaced by someone less critical.

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