Perspectives on policy analyses: a framework for understanding and design

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Abstract: Policy analysis is a broad and versatile field of applied policy research and advice, where a multitude of perspectives and methods have developed. In this paper, we attempt to (re)structure the discipline in a single conceptual model. The model was derived on the basis of a review of relevant literature on policy analysis styles and a review of about 20 exemplary cases in the field of technology, policy and management. The model serves three purposes: understanding of policy analysis as a discipline, contribution to the design of new policy analysis methods and projects, and guidance for evaluating such methods and projects. The model identifies six activities and translates these into six underlying policy analytic styles. Each style implies different values, and calls for different criteria when it comes to evaluation. An important claim of the model is that, in practice, policy analysis consists of creatively combining these activities and styles.

Keywords: applied research; policy analysis; policy design; policy evaluation; policy research; methodology.

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1   Introduction

Policy analysis is a multi-faceted field in which a variety of different activities and ambitions have found a place. Some policy analysts conduct quantitative or qualitative research while others reconstruct and analyse political discourse or set up citizen fora. Some policy analysts are independent researchers; some are process-facilitators, while others act as political advisers [1–3]. The debate on the discipline – for example, on its foundations, underlying values and methods – is conducted in a fragmented way [4–20]. This is a pity, because it tends to sideline a reflection on the relationship between applied research, the use and development of methods in relation to policy advice and policy processes.

The variety and multi-faceted nature of policy analysis makes it clear that there is no *single*, let alone 'one best', way of conducting policy analyses. The discipline consists of many different schools, approaches, roles and methods. The observed diversity of policy analysis does give rise to numerous questions. If we are unable to construct cohesion and unity behind this great diversity, we cannot speak of a discipline. What relationship exists between the different schools and activities in policy analysis? Do they exclude each other or are there – in practice – numerous hybrids and combinations? What conceptual framework do we have at our disposal if we need to demarcate the discipline, design new methods and approaches, or evaluate projects? Can we enrich the methodological toolbox by adding new methods? What is the relationship between policy analysis methods and new insights from the policy sciences, such as interactive policy development and process management [21,22]? These are important questions that we obviously cannot answer in full and all at once, but for which we modestly hope to provide a framework.

2   Untangling and explaining

The great diversity of views, schools and methods easily causes confusion and gives rise to the need for insight into the discipline for insiders and outsiders alike [16,20]. Various attempts have been made to untangle and explain policy analysis as a methodical discipline. Some well-known examples of models in which activities and methods are systematically related can be found in Dunn [4], Brewer and DeLeon [5], Hogwood and Gunn [6], Bobrow and Dryzek [23], Miser and Quade [24] Patton and Sawicki [25], Weimer and Vining [13] and Mayer [17].

It is precisely because of the varied developments in policy analysis and the diffuse image that they create of the field, that this paper seeks to make the field transparent and to structure it with the help of a framework or *conceptual model*. Structuring will not take place by choosing a specific author, perspective or school, but rather by displaying the variety of views of policy analysis. It is not our intention to adopt a normative standpoint on what the most preferable form or style of policy analysis should be. This paper provides a framework for positioning the different perspectives and for highlighting the implications of choosing a perspective when designing or evaluating a policy analysis project.

The presented conceptual model therefore has three functions. First, structuring the field into activities and styles provides a greater insight into and overview of the diversity of policy analysis. The model is a means to demarcate and understand the field as a

whole. Second, when designing a particular policy analysis project, the analysts will select methods and tools they consider to be appropriate. The model can support choosing existing methods and designing new methods. Third, we believe that the quality of a policy analysis project can be judged from different perspectives. The model helps to formulate the values pertaining to a perspective, values from which criteria for the evaluation of a policy analysis project can be derived.

3 Research approach

3.1 Deductive approach

In our attempt to (re)structure the different styles and construct a conceptual model, we reviewed the authoritative literature on the development of policy analysis and policy analysis styles. This review led to an important observation. All characterisations of policy analysis are inclusive of a limited number of preferred styles but are also exclusive of other styles, either because these are not considered at all or because they are criticised as not being (effective) policy analysis (e.g. [26]). From the present literature, a preliminary classification of policy analysis activities, roles and values was constructed.

3.2 Inductive approach

In order to construct some cohesion and unity behind this great diversity we decided not to limit ourselves to the rather abstract characterisations of policy analysis presented in the literature, but to first take a closer look at what general activities policy analysts perform in the policy process. We developed a set of generic policy analytic questions and selected a number of exemplary, accessible and contrasting cases of policy analysis conducted by some of the most authoritative policy analysis institutions in The Netherlands: RAND Europe, Delft Hydraulics, RIZA (Institute for Inland Water Management and Waste water Treatment), AVV (Transport Research Center) and others. The case selection was based on the following criteria:

- *Policy analysis*. All cases were externally initiated (by clients) for actual policy and decision support.

- *Focus*. All cases were related to technological or infrastructure decision and policymaking.

- *Variety*. The cases represented a wide variety of activities and approaches.

- *Accessibility*. Background, approaches and results of the cases are reported in generally accessible (scientific) publications or project reports. If needed, policy analysts involved in the projects were consulted. In all cases, TPM faculty members had direct or indirect access to detailed information about the policy analysis process.

Table 1 presents an overview of cases that we reviewed. For reasons of space, we cannot discuss all cases at length. Below, we will therefore discuss six archetypical cases as illustrations of our conceptual model.

Table 1   Reviewed policy analysis studies

Name project	Main references
Water management	
POLANO study (Policy Analysis of the Oosterschelde)	Goeller [27]
PAWN (Policy Analysis of Water Management)	Goeller [28]
Dutch river dike studies	Walker et al. [29], Twaalfhoven [30] and van de Riet [31]
IVR study (Landscape planning for the river Rhine)	Twaalfhoven [30]
Transport/road, sea	
Sea sluice study	van de Riet [31]
FORWARD (Freight Options for Road, Water and Rail for the Dutch)	Twaalfhoven [30] and EAC [32]
TNLI (Civil Aviation Infrastructure Options)	RAND Europe [33] and van Eeten [34]
SVV coloured in	Twaalfhoven [30]
CAU study (Corridor Amsterdam-Utrecht)	Twaalfhoven [30]
Process advice student public transport	De Bruijn et al. [6]
POLSSS (Policy for Sea Shipping Safety)	Walker et al. [35] and Pöyhönen et al. [36]
Environment	
IMAGE	Alcamo [37], Rotmans [38] and Daalen et al. [39]
Sustainable Urban Living (EASW)	Mayer [17] and Joss and Belluci [40]
Titanium Dioxide study	Rijkswaterstaat [41]
Genetic and medical technology	
Consensus conferences on genetic modification of plants, animals, screening, cloning etc.	Joss and Belluci [40] and Mayer [17]
DMARD therapy study	Beusekom et al. [42]
Science and technology policy	
OCV foresight studies	Tijink [43]
Technology Radar	Walker et al. [44]
Spatial planning and construction	
COB N410 (Integrated Assessment Underground Constructions)	Enserink et al. [45] and Edelenbos et al. [46]
Maasvlakte 2	RAND Europe [47]
Dynamic de Bilt/Living in Wijnbergen	Edelenbos [48]

In a secondary analysis, we restructured the above cases for: (1) activities that were performed; (2) the underlying values that seemed manifest; (3) the role of the policy analyst. By and large, we were able to reduce the generic set of policy analysis activities derived from the literature and the cases, to six dominant policy analytic activities. With this set of activities we returned to the general characterisations of policy analysis schools

and models and asked what activities were prevalent in these models. We reformulated these models and paradigms in more general and neutral terms.

In the sections below, we will create the conceptual model step by step. The activities and styles are portrayed in an archetypical way, i.e. the way they are presented in the literature by proponents of the style.

4 A set of interacting activities

Our strategy in developing the model has been to first address the question: "What general activities do policy analysts perform when it comes to supporting policy and policy processes?" From the cases (see Boxes 1–6 for a selection of examples) we have identified six major clusters of activities. They are:

- research and analyse

- design and recommend

- clarify arguments and values

- provide strategic advice

- democratise

- mediate.

In real-life cases and projects, a policy analyst will combine one or more activities, albeit not all at the same time. When more activities are combined, a policy analysis project will become richer and more comprehensive, but also more complex.

The hexagon in Figure 1 is a diagrammatic representation of these six activities. The theoretical foundation will be discussed later in this paper, when we show the policy analysis styles and values on which the clustering of activities has been based. In this section, we focus on the six activities and illustrate these with the help of examples based on policy analyses. At the end of this section, we will look at the relations between the various activities in more detail.

Figure 1 Overview of activities that make up policy analysis
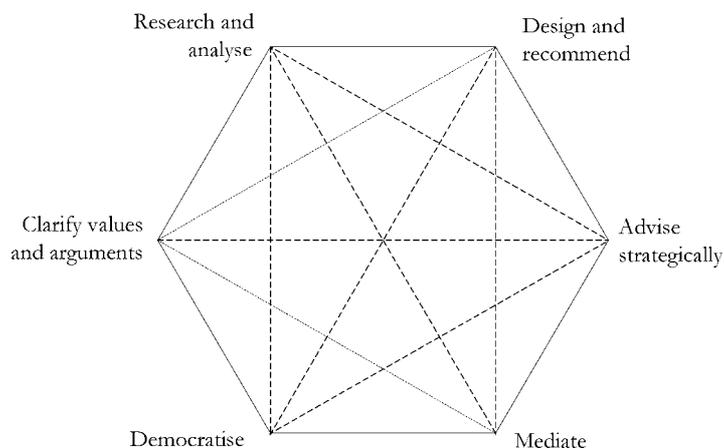
4.1   Research and analyse

Has the number of cases of driving under the influence of alcohol increased compared to previous years? Has privatisation of public utilities and services led to lower prices for consumers? Is our climate really changing? And if so, how is it likely to affect coastal regions?

Questions like these, that are relevant to policy, are about facts, causes and effects, and therefore call for scientific research. In some respects and manifestations, policy analysis is indeed a form of applied research (cf. [4]) that uses research methods and techniques that are scientific or derived from science, such as surveys, interviews, statistical analysis but also simulation and extrapolation. This cluster of activities matches with a perspective on policy analysis as knowledge generation. Knowledge institutions such as statistical agencies, semi-scientific research institutions and research agencies gather and analyse, on request and at their own initiative, knowledge and information for policy purposes. It is possible that the political agenda influences their research priorities, but the results of their autonomous research activities may also influence the political agenda. Translation of the results of their research into a policy design or recommendation is not a primary part of their task or mission. It is up to the political system to identify consequences and draw conclusions from the best available knowledge. Box 1 contains an example of a policy analysis project where the research and analyse cluster was of particular importance.

Box 1   Research and analyse: the IMAGE 1.0 model

The IMAGE project (Integrated Model to Assess the Greenhouse Effect) is an example of research and analysis in the field of climate change. The example dates back to the situation prevailing in the mid-1980s, when climate change was not yet a major political issue in The Netherlands. After developing a successful prototype, the Dutch National Institute of Public Health and the Environment (RIVM) started developing the IMAGE 1.0 model in 1986 [38]. IMAGE 1.0 used simplified models of the carbon cycle and of atmospheric processes to calculate future atmospheric greenhouse gas concentrations and the accompanying changes in temperature and sea level for a number of different scenarios of future emissions of greenhouse gases. IMAGE 1.0 was the first model in which an attempt was made to integrate the climate system all the way from emissions to effects. The output of IMAGE 1.0 attracted public and political attention because the model's results were incorporated in the first Dutch National Environmental Outlook in 1988. The results in themselves were not new, but the integrated picture of impacts of different emission scenarios helped to put the climate issue high on the political agenda [39].

4.2   Design and recommend

What can the government do to improve the accessibility of large cities? What measures can municipalities take to improve local safety? How can the container storage capacity in harbour areas best be increased – by improving utilisation of existing capacity or by creating more capacity?

These policy questions are mainly design and solution oriented. When sufficient data and information have been gathered in earlier research, a policy analysis will focus on translating the available knowledge into new policy, either by making recommendations or by making a complete policy design. Recommendations will typically be the result of comparing the effects of different policy alternatives and weighing the options based on various criteria. Policy analysts in this way are supportive to the policy process by translating available knowledge into new policy either by advising or by making (partial) policy designs in terms of 'actions–means–ends'. A complete policy design typically involves generating a set of alternative strategies that each consists of several tactics aimed at achieving particular objectives or sub-goals (see [49]).

Box 2 contains an example of a project where the prime consideration was the assessment of alternatives.

Box 2   Design and recommend: the FORWARD study

The following project in the field of freight transport is an example in which a policy analysis was aimed at design and recommendation. At the end of the 1980s, the Dutch Government was faced with the goals of sustainability as well as economic growth in the transport sector, and decided that action needed to be taken. The proposed policy was published in a policy document in 1990. This document, however, did not include many policy statements on freight transport, and various parties argued that there could be more attractive alternatives to a number of the policy options that had been suggested [30]. As a result, a broad study was commissioned. This analysis of Freight Options for Road, Water And Rail for the Dutch (FORWARD) was carried out by RAND Europe and it examined the benefits and costs of a broad range of policy options for mitigating the negative effects of the expected growth in road transport while retaining the economic benefits [32]. The study involved the development of a comprehensive policy analysis model and the identification of some 200 tactics that might be combined into various strategies for improving freight transport. The model enabled the design and assessment of policy options for several economic scenarios extending to the year 2015.

4.3   Clarify values and arguments

Why, or more accurately about what, is there a clash of opinions between supporters and opponents of river dike enforcement or the expansion of a National Airport? What values and arguments come to the fore as regards approving or rejecting developments in the field of modern genetic technology, as in the case of pre-natal diagnosis and cloning?

There will always be implicit normative and ethical questions and opinions behind public policy. Prolonged conflicts and social issues that turn into stalemates often come about through fundamental normative and argumentative differences [14,34]. Abortion, euthanasia, and drilling for natural gas in protected areas are examples of such issues. Policy analysis may not only make instrumental recommendations for policy-making; it may also analyse the values and argumentation systems that underpin social and political debate. Moreover, policy analysis seeks to improve the quality of debate by identifying the one-sided or limited nature of arguments or showing where blind spots exist in the debate [14,18]. Box 3 contains an example of the clarification of the arguments of different stakeholders.

Box 3   Clarify values and arguments: civil aviation infrastructure

An example of a project in which argumentation analysis was used, is a policy analysis commissioned in 1997 by the Future Dutch Aviation Infrastructure project (TNLI). Representatives of the Ministry of Housing, Spatial Planning & Environment, the Ministry of Transport, Public Works & Water Management and the Ministry of Economic Affairs joined forces in a project group to prepare policy on this subject. The aim of the policy analysis was to put forward recommendations for the design of, and agenda-setting for, a broadly-based public debate. A discourse analysis formed part of this policy analysis [34].

The debate on the future of Amsterdam Airport Schiphol regularly boils down to a dichotomy: either for or against expansion. However, this dichotomy contrasts with the wealth of ideas that come to the surface in the real debate. In the analysis, the Q-methodology was used to reconstruct and understand the underlying lines of argumentation. A study conducted among 38 representatives of the actors involved revealed the existence of five important views that fell outside the confines of the simple for-or-against setting. An example is "search for sustainable solutions for a growing demand for mobility". By ignoring these views of the problem, options and arguments that could lift the debate out of the growth/no-growth dichotomy are left unutilised. The recommendations that resulted from this discourse analysis were used in the design of the public debate, in which discussion platforms were set up based on the five policy arguments.

4.4   *Advise strategically*

What should a government minister do to bring about acceptance of road pricing plans? What strategy can a government minister adopt to allocate radio frequencies?

These questions illustrate that policy analysis will often be a strategic, client oriented activity. The substantive or procedural advice will be made dependent on the analysis of the field of forces that exist, i.e. the environment in which the client and his problem are located. The policy analyst will advise the client on the most effective strategy for achieving certain goals given a certain political constellation, i.e. the nature of the environment in which the client operates, the likely counter-steps of opponents, and so on.

Box 4 contains an example of a policy analysis project that emphasised the 'advise strategically' cluster.

Box 4   Advise strategically: waste discharge policy

A policy analysis in which strategic advice was given to the Dutch Ministry of Transport, Public Works & Water Management addressed the problem of discharges of waste substances into the sea by the titanium dioxide industry [41]. Titanium dioxide is produced for the paint industry. Its production releases waste substances that were still being discharged into the North Sea at the time the study was conducted in the 1980s. Some companies had exemptions for the discharge of environmentally harmful waste substances. As the expiry date of the exemptions approached, the Dutch government had to determine its position on the future strategy for discharges. Circumstances the government had to consider included the possible reactions of producers – they could have decided to continue the discharges elsewhere – and developments in the sector, such as European Union regulations. The Directorate-General's policy analysts used a decision-event tree to analyse how producers might respond to decisions concerning the final dates for discharges. The analysts made allowance for uncertainties regarding the availability of alternative production technologies, and the time of development of European legislation in this field. The Dutch government adopted their strategic advice.

4.5   Democratise

How can citizens receive more and better information about how to have their say in decisions regarding important social issues like genetic technology or a new metro line? How can citizens make an informed choice when it comes to a tricky and difficult question like the reconstruction of a railway station area?

In the democratise cluster of activities, policy analysis does not have a value-free orientation, but a normative and ethical objective: it should further equal access to, and influence on, the policy process for all stakeholders [9,50,51]. Experts and elites are more likely to be involved and carry greater weight than ordinary citizens and laymen [52]. Policy analysis can try to correct this inequality by calling attention to views and opinions typically overlooked in policymaking and decision-making [53]. Box 5 gives an example taken from the field of technology assessment [17].

Box 5   Democratise: genetic modification

An example of a democratisation project is the first Dutch consensus conference that was organised in 1993 by the Dutch parliamentary technology assessment organisation to address the issue of the genetic manipulation of animals. In this public debate, citizens discussed the subject with all kinds of experts, such as researchers, representatives of environmental groups, industry and ministries. The panel consisting of sixteen laymen was selected from people who responded to a newspaper advertisement, and the organisers prepared the panel for the debate in two weekends. The preparations resulted, among other things, in a list of questions for the experts. The actual debate took place during a weekend in which ideas, problems, risks and choices were discussed. At the end of the second day, the participants wrote a final declaration that was published and also presented to Parliament. Today, the participation of laymen plays a more prominent role in technology assessment. The consensus conference format, originally a Danish method for public participation, has been adopted in many countries [17,40].

4.6 Mediate

How can industry and government agree on the moderation of their dispute about the possible harm caused by zinc emissions to the environment and health? How can they deal with conflicting findings of scientific research on this matter? What is a good process for exploring the future of a municipality with all stakeholders such as citizens, businesses and so on?

These questions show that resolving policy issues may require mediation. Policy analysts can play a role as process designer or process supervisor. In this role, the policy analyst designs the rules and procedures for negotiating in a policymaking or decision-making process and manages the interaction and progress of that process.

The mediation cluster comprises different types of activities, with a focus on analysing contextual factors (stakeholders, issues, dependencies, tensions, tradeoffs), and designing, and possibly also facilitating, meetings in which different stakeholders and decision-makers consult and negotiate. The policy analyst mediates during the design of the negotiation process as well as its execution. Box 6 contains an example of a policy analysis that emphasises mediation activities.

Box 6   Mediate: public transport passes for students

A recent example regarding mediation is a project in which the Dutch Ministry of Education, Culture & Science, the Dutch Railways and the association of regional transport companies jointly commissioned consultants to design a process to break a stalemate regarding the travel behaviour of students holding a state-funded public transport pass. The results of a first, substantive policy analysis prompted the Ministry to call for a second opinion. The public transport companies disagreed with the results of the second opinion. However, all parties recognised that the negotiation results would be more readily accepted when based on solid research that both parties believed answered the right questions. The analysts were asked to mediate between the parties on a protocol to reach agreement on data. The protocol they developed included a timetable of the actions required from each party, and specified how to proceed if the parties agreed or disagreed on the results of those actions [22].

4.7 Relations between the activity clusters

Depending on the specific policy analysis design, one or more of the activity clusters may become dominant, while other activities may play a subordinate role in certain (phases of) projects, or be irrelevant. In Figure 1, we have arranged them in such a way that activities we consider to be most akin are shown alongside each other. For example, design and recommend activities are a logical extension of research and analyse activities, and clarify values and arguments activities can feed into democratisation and mediation activities.

The further away activities are from each other, the greater the field of tension for uniting the activities will be. A scientific research activity can easily conflict with the pragmatic and involving nature of mediation between actors. But if we identify opposing activities as fields of tension, we certainly do not mean that these activities are incompatible. The tension will have to be resolved in the specific policy analysis design. It will be necessary to make an 'arrangement' whereby – for example – the analysis of arguments and underlying values can support the mediation and dialogue between

conflicting standpoints; or whereby the design of the analyst is produced through open and equal dialogue with citizens, laymen and stakeholders. It is precisely the bridging of these tensions that generates innovation in projects and methods.

Combinations of two adjacent clusters of activities can be traced to specific styles of policy analysis. We will look at this matter of styles of policy analysis in the next section.

5   Policy analysis styles

It is the objective of our model to clarify and understand the discipline of policy analysis. Numerous schools of thought, paradigms and models can be found in the policy analysis literature [9,11,12,17,23]. In this paper, we will refer to styles of policy analysis rather than to a paradigm, model or school. Based on the schools discussed in the literature and the framework of our model, we have identified six policy analysis styles. They are:

- a rational style

- an argumentative style

- a client advice style

- a participatory style

- a process style

- an interactive style.

Figure 2 shows how these styles relate to the activities discussed above. Below, we will briefly discuss the styles in an archetypical manner. We will focus on the arguments that are used by proponents of these styles.

Figure 2   Policy analysis styles linked to activities
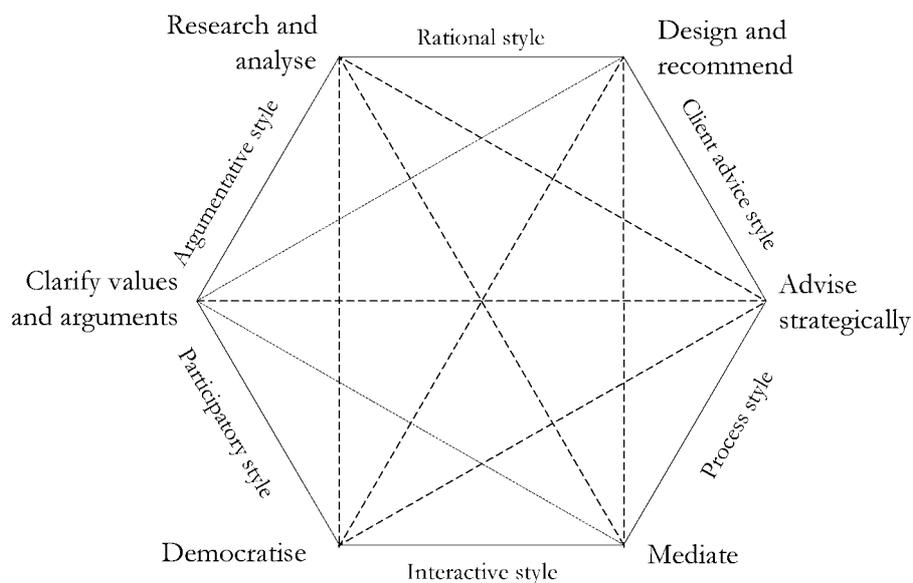
5.1   The rational style

The rational style is shaped to a large degree by assumptions about knowledge and reality, and by a relatively large distance between the object and subject of study: it is assumed that the world is to a large extent empirically knowable and often measurable. Knowledge used for policy must be capable of withstanding scientific scrutiny. The role of knowledge in policy is a positive one, i.e. a greater insight into causes, effects, nature, and scale produces better policy [54]. Policy should come about – preferably – in neat phases, from preparation to execution, with support through research in each phase.

An example of this policy analysis approach is the systems analysis method developed by the RAND Corporation [24,55]. The advice on policy regarding the Eastern Scheldt storm surge barrier in The Netherlands was obtained using this method [27]. This style is discussed in many general textbooks on methods of policy analysis [10,12,25].

5.2   Argumentative style

This style assumes that policy is made, defended, and criticised through the medium of language. The basic assumption of the argumentative style is therefore that when analysing policy, it is important to devote attention to aspects related to the language game that takes place around a policy problem or issue. Attention will shift to the debate and the place in the debate of arguments, rhetoric, symbolism and stories [14,34,56]. Arguments aim to have an effect on the public. The positions of parties and the argumentations in a policy discourse are not always clear and unambiguous, however. Therefore, policy analysis will make policy easier to understand by illustrating the argumentations and the quality thereof schematically and making a judgment based on criteria such as justification, logic and richness [4,57]. But the ambition of argumentative policy analysis is to use such an analysis to produce recommendations and improvements in situations where parties have been talking at cross-purposes for many years: a dialogue between the deaf [34]. The argumentative style assumes that it can make the structure and progress of the discourse transparent by means of interpretive and qualitative methods and techniques, and can also bring about improvements by identifying caveats in the debate or searching for arguments and standpoints that can bridge the gap between opponents. This style of policy analysis centres on discourse and argumentation analyses so as to frame the different standpoints of clusters of parties and, if possible, change and influence them.

5.3   Client advice style

In a number of respects, the client advice style is based on assumptions that policymaking occurs in a complex and rather chaotic arena. There are numerous players, with different interests and strategies [22,58]. Therefore, it is wise to gain insight in the various objectives, means and interests of the actors involved. For that reason, the analysis of this complex environment is important and can be undertaken analytically and systematically by such means as stakeholder analyses, although intuition and soft information definitely play a role. Besides knowledge and insights gained through research, policy analysis is largely a question of politico-strategic insight and skills including client-analyst communication. In addition to being a skill, methodical and explicit, policy analysis is also an art in which tacit knowledge plays an important role [8]. Depending on

orientation, the client advice style involves a more design-oriented approach or a strategic, process driven approach.

5.4   Participatory style

Participatory policy analysis views the relationship between research and advice on the one hand and policy and politics on the other by looking at society critically [52,53]. Here it is assumed that not all sections of the population have ready access to policy systems. Researchers, economic elites, institutionalised non-governmental organisations and politicians dominate policy discussions and decisions about major social issues [59]. Researchers, stakeholders and policymakers will even change roles and positions within one and the same system. Certain subjects and also certain groups of actors are often excluded from the social debate. This is referred to as the technocratic criticism of policy analysis [52]. Participatory policy analysis assumes that citizens can have a voice and be or become interested enough to deliberate on substantive and politically difficult questions [17,50,53,60–62]. The policy analyst can take on a facilitating role in such a debate by promoting equality and openness in the design and by giving ordinary citizens and laymen a role alongside others [17]. The European Participatory Technology Project [40] includes examples of projects in various European countries whereby democratisation of the debate on controversial issues of science and technology has been achieved with laymen and ordinary citizens [40].

5.5   Process style

Just as in a game of chess, the parties that participate in a policy-making process will exhibit strategic behaviour in the pursuit of their own objectives and achievement of the best possible positions, even if such action runs counter to the public interest formulated in policy [22]. It is perfectly understandable that, in controversial and complex issues, opponents will underpin their case with conflicting research reports. Impartial experts do not exist and a solution by way of new reports and studies can aggravate the problem in a certain sense. In fact, knowledge is (not much more than) negotiated knowledge. It is better to negotiate and reach agreements about the use of the results of a study or jointly contracting research [22].

The process style of policy analysis is based on the assumption that substantive aspects of a policy problem are, in fact, coordinate or perhaps even subordinate to the procedural aspects of a policy problem. The analyst or process manager creates 'loose coupling' of procedural aspects and substantive aspects of a problem. Procedural aspects are understood to be the organisation of decision-making or the way in which parties jointly arrive at solutions to a problem. To that end, agreements can be reached through 'mediation and negotiation'. If the procedural sides of a policy making or decision-making process have been thought through properly, it will greatly increase the likelihood of substantive problems being resolved. Substantive problems can be made part of a process design, for example, by placing the different substantive aspects on the agenda.

5.6   Interactive style

The interactive style of policy analysis assumes that individuals – experts, analysts, clients, stakeholders and target groups – have or may have differing views of the 'same' policy problem. An insight relevant to policy can be obtained by bringing about a confrontation and interaction of different views. The interactive style has a strong socio-constructive foundation. Different views of reality can be valid simultaneously. Through continuous interaction and interpretation – the 'hermeneutic circle' – it is possible to gain an 'insight' [63].

In an interactive style of policy analysis, target groups and stakeholders are usually invited to structure problems or devise solutions in structured working meetings at which policy analysis techniques may be used [64]. This brings about a multiple interaction whereby the views and insights of the analyst, the client and also the participants are enriched [21]. In other words, participants learn about their own views in relation to those of others, and have an opportunity to refine those views. The selection of views is obviously crucial. Political considerations – the power to obstruct – and enrichment arguments – what do citizens really think? – may be interwoven. What matters is the quality of the obtained insights in combination with the heterogeneity of opinions and interests. If policy analysis concerns the redevelopment of a city square, for example, stakeholders such as local residents and business people can be consulted by means of workshops about the problems they experience with the present arrangement of the square and their wishes with regard to the new plans. The interactive style assumes that a process like this is informative for decision-makers and planners, is more likely to lead to acceptance and fulfilment of the plans, and can bring about all kinds of positive effects among the participants (learning about each other and about policy processes) [21].

5.7   Definition of archetypal styles

Figure 2 shows the policy analysis styles placed in an 'archetypal' way between the different activities. This rightly suggests that a style balances on two important activities. This balance does not necessarily need to be in equilibrium. Participatory policy analysis balances between democratisation and clarification of values and arguments. The emphasis may be more on one activity than on the other: citizens can be directly involved in discussions about genetic technology, or the analyst may be mainly interested in the value systems, arguments and opinions of citizens about the technology and may want to systematise them for the purpose of policy advice.

The argumentative style balances between research and analyse and clarification of values and arguments. Some argumentative policy analysts attempt to improve the quality of policy by testing the policy design as thoroughly as possible, or by building on consistency, validity etc. of the underlying arguments [4]. This is based on the principle that 'claims' must be backed up by facts ('backings'). The 'formal logic' is dominant in this setting. Others reconstruct arguments, not in relation to scientific quality, but according to their variety and richness. This allows greater scope for normative systems, religion and intuitive arguments [56].

In a similar way, the rational style balances between researched analysis and advisory design; the interactive style between democratisation ambitions and mediation activities; the client advice style between substantive design and strategic advice; and the process style between strategic advice and mediation.

The styles of policy analysis may thus have different manifestations and emphases. A focus on a certain activity may result in a style leaning more towards one activity than to another.

5.8   *Combining activities*

In the preceding sections of this paper, we have differentiated between the policy analysis styles by showing that they balance between two activities. It is also possible to let go of the balance and to make combinations of activities that are not adjacent to one another. In other words, a policy analytic arrangement will be made whereby two or more activities that are opposite, rather than adjacent, to each other in the hexagon of Figure 1 can be combined. This kind of combination or arrangement, symbolised by the dashed diagonals in the hexagon, is achievable in two ways:

- The activities can be carried out sequentially or separately, either in various parts of one policy analysis project or in different complementary or competing projects; i.e. a form of methodological triangulation of activities. As part of a policy analysis project focusing on climate change, for example, first research can be conducted by experts using climate models (activity: research) and subsequently the perceptions and arguments of ordinary citizens and laymen regarding climate change can be mapped out (activity: clarify arguments).

- The various activities can be integrated into one design or method. As part of a project focusing on climate change, for example, climate models can be used to get various groups of stakeholders, experts, politicians and so on to jointly generate and test policy proposals, while obtaining feedback from representative citizen panels. Such a design would integrate various activities: research, design, democratise and mediate.

6   Underlying values

In addition to demarcating and understanding the field of policy analysis and designing a policy analysis project, our model has a third function: evaluation of policy analysis projects and methods [30]. The various activities and styles are based on underlying values and orientations. The values determine in what way a policy analyst or others will view the quality of the policy analysis study and the criteria that will be applied to examine it. These criteria can be made explicit by addressing the following questions:

- *Rational style*. What is good knowledge?

- *Argumentative style*. What is good for the debate?

- *Client advice style*. What is good for the client/problem owner?

- *Participatory style*. What is good for democratic society?

- *Process style*. What is good for the process?

- *Interactive style*. What is good for mutual understanding?

Figure 3 shows that the activities in the top half of the hexagon are primarily *object-oriented activities*: a system, a policy design, an argumentative analysis. The activities at the bottom are *subject-oriented activities*. They focus primarily on the interaction between citizens, stakeholders, the analyst and the client. Whereas the top half activities are usually captured in a product – e.g. a report, a design, a computer model – the effects of the bottom half activities are usually captured in the quality of the process itself: increased support base, mutual understanding, citizenship, learning. The distinction 'object–subject' translates into the types of evaluation criteria to be applied. Object-oriented policy analysts will judge the quality of a policy analysis by its scientific rigor or the substantive insights it has yielded. Subject-oriented policy analysts will base their judgment on the contribution of the orchestrated interaction between stakeholders to the decision-making process. The turning point between object and subject oriented activities lies with 'clarification of values and arguments' and 'provision of strategic advice'. These can be either object-oriented and/or subject-oriented.

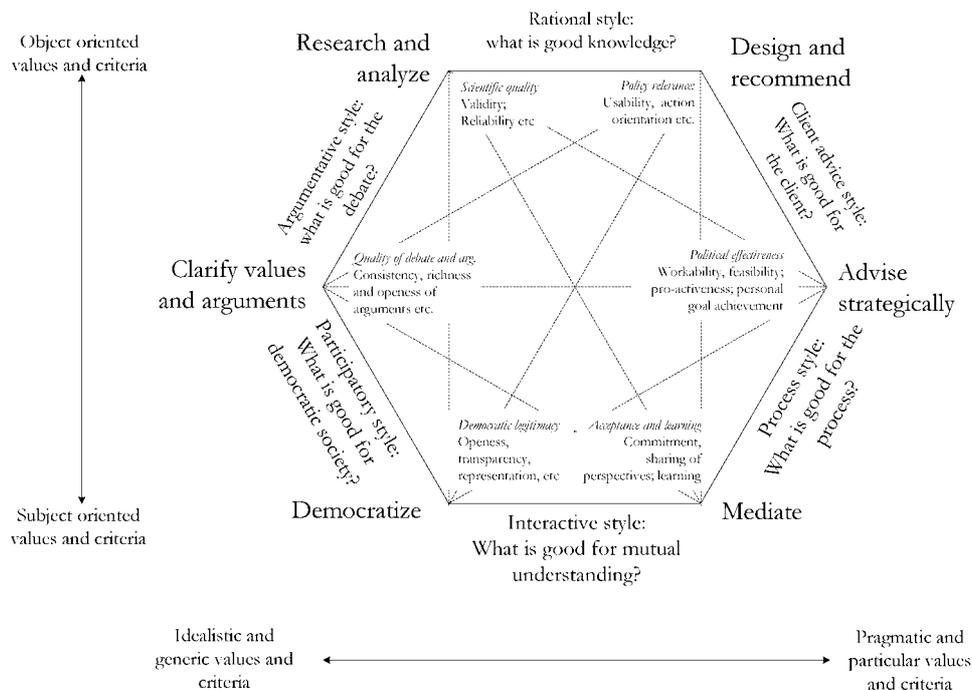**Figure 3**   The underlying values and criteria of policy analysis

Figure 3 also shows that the activities on the left-hand side are judged by *idealistic* and *generic* criteria for good policy analysis, such as validity, reliability, consistency, fairness, equality or openness. The activities on the right-hand side of the hexagon are judged by *pragmatic* and *particular* criteria, such as workability, usability, opportunity, feasibility or acceptance.

These criteria for evaluating the quality of a policy analysis project or method are summarised in Box 7 and appear in the corners of the hexagon in Figure 3.

Box 7   Translation of values into quality criteria

Research and analyse

Policy analysis will be judged by substantive (scientific) quality criteria such as validity and reliability, the use and integration of state-of-the-art knowledge, the quality of data gathering and the formal argumentation and validation of conclusions.

Design and recommend

Policy analysis will be judged by instrumental criteria of policy relevance, such as usability and accessibility for policymakers, action orientation and utilisation, presentation and communication of advice, weighing up of alternatives, clear choices and so on.

Clarify values and arguments

Policy analysis will be judged by quality of argumentation and debate criteria such as formal logic (consistency), informal logic (rhetoric and sophism) and quality of the debate in terms such as richness, layering, and openness of arguments.

Advise strategically

Policy analysis will be judged by pragmatic and political effectiveness criteria such as the 'workability' of advice, political cleverness and proactive thinking, greater insight (for the client) in the complex environments (political and strategic dynamics, forces and powers), targeting and achievement of goals.

Democratise

Policy analysis will be judged by democratic legitimacy criteria such as openness and transparency of the policymaking process, representation and equality of participants and interests, absence of manipulation and so on.

Mediate

Policy analysis will be judged by external acceptance and learning criteria such as the agreement that mutually independent actors reach on the process and/or content, support for and commitment to the negotiating process and solutions, learning about other problem perceptions and solutions.

6.1   The role of the policy analyst

As the presented model is based on activities, styles and their associated values, it also generates and organises the positive and negative images, the metaphors, of the policy analyst [1–3]. Some policy analysts allow themselves to be guided mainly by their wish to conduct objective scientific research; these are the *objective technicians*. In contrast, others seek interaction with their client; these are the *client advisers* or counsellors. Some advocate a clear standpoint such as a more stringent environmental policy; these are the *issue activists*. How the role of a policy analyst is perceived depends on ones own values and position in a policy process. A skilful strategic advisor, for example, may be highly appreciated by his/her client, but portrayed as a hired gun by his/her client's opponents. In Table 2, positive and negative images of the role of the policy analysts are depicted for each activity.

Table 2   Images of the policy analyst

Activity	Positive role image	Negative role image
Research and analyse	Independent scientist; Objective researcher	A moral researcher; Technocrat
Design and recommend	Independent expert; (engineer); Impartial adviser	Desk expert; 'Back seat driver'
Clarify values and arguments	Logician or ethic; Narrator	Linguistic purist; 'Journalist'
Advise strategically	Involved client adviser; Client counsellor	'Hired gun'
Democratise	Democratic (issue) advocate	Missionary; Utopian
Mediate	Facilitator; Process manager	Manipulator; Mediator 'Relativist'

7   Perspectives on the field of policy analysis

Figure 4 presents the complete conceptual model in which policy analysis activities are related to underlying styles and values and the policy analyst's roles. The figure enables us to demarcate all manifestations and varieties of policy analysis and also to develop new approaches and methods. Methods developed mainly within one style of policy analysis can be combined with insights from another style and adapted to new activities. Below, we will briefly recapitulate the functions of the model, i.e. demarcate, design and evaluate.

Figure 4   Conceptual model of policy analysis
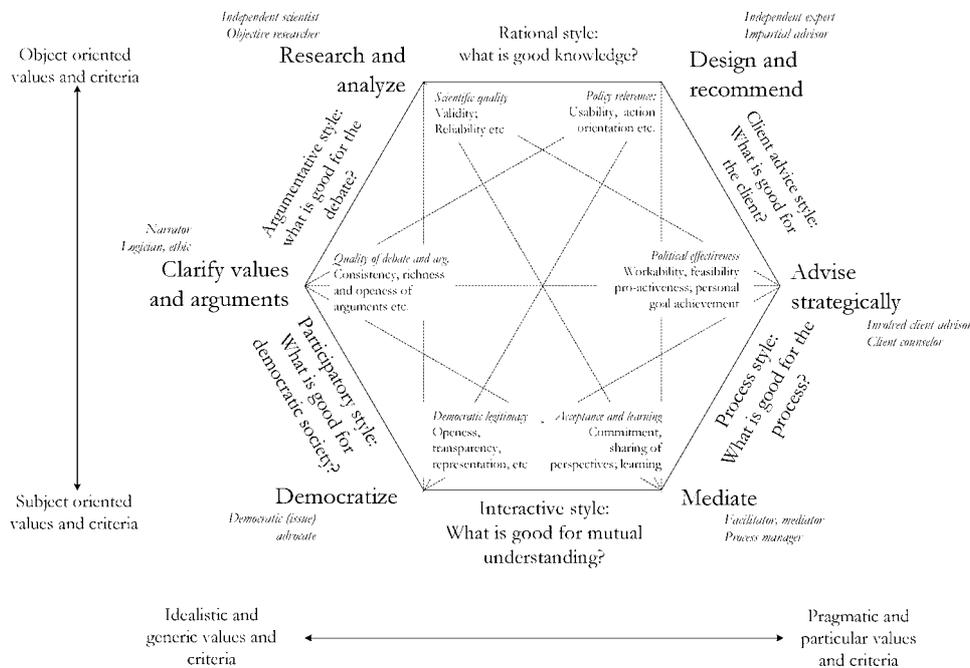
7.1 Reflection on policy analysis

Policy analysis is characterised by ambitions but also by ambivalences. Various approaches criticise each other and it is very difficult to define and describe what policy analysis is. The added value of our model is that it shows why policy analysis is ambivalent and elusive, namely because the proponents and opponents reason from different points of departure; about what they are doing, why they are doing it, and the limitations or conversely the richness of the discipline. It is not our intention in this paper to adopt a position on our preferred form of policy analysis, even if we were to have one. Depending on one's own position, one may accept the wide picture of policy analysis as depicted in our model, but it is likely that many will argue that certain styles or activities are not (proper) policy analysis (e.g. [26]): for those critics, the hexagon may turn into a straight line, a triangle or a square. The problem, of course, is that there will be no disciplinary consensus on what activities and styles to cut from the hexagon and on what grounds. For every policy analytic style there are both proponents and critics. Given the actual and desirable development of the various definitions of policy analysis, we are of the opinion that the discipline can better be defined too widely than too narrowly. The integrated conceptual model offers full scope without losing the unity of the policy analysis and causing the disintegration of the field. The model offers the possibility to examine policy analyses already performed and to relate these to each other. The model seeks to provide a foothold, or a framework for demarcating the wide field of work.

7.2 Design of a policy analysis

The model provides an overview of the wealth of possibilities of policy analysis studies and the interrelationships between them, and can be of help in reflecting consciously and creatively on the design of a policy analysis. As a rule, policy analysis projects require a customised design. It is possible, however, to fall back on standard methods of policy analysis, although the choice and combination of methods will depend on the problem under examination. The model definitely does not seek to prescribe instrumentally how a policy analysis should be designed. The opposite is the case, because we advocate creativity and innovation in designing approaches, actions and methods. Innovative combinations of researching, designing, recommending, mediating, argumentation and democratisation can be made. If desired, a rational style of policy analysis may be combined, for example, with a process style. This would 'interweave' analytical or scientific study in mediation processes between parties [22].

We consider the design of policy analysis to include the development of new methods of policy analysis so as to allow a good integration of sub-activities. In point of fact, the history of policy analysis is characterised by the repeated application of creative and intelligent combinations of methods; methods that originated in one domain are translated into applications for other domains. The, by now, classical Delphi method and scenario method came about as methods for studying the future, but are currently used for strategic advice, mediation and even democratisation in policy Delphis, interactive scenario methods and scenario-workshops [17]. Cross-impact techniques and stakeholder analysis techniques, which came about as methods for advising clients, now have principally interactive applications and are used for mediation. Consensus conferences that came about as a method for study and mediation between top-experts in medical

scientific controversies have been transformed into methods for democratising and for public participation [17,40,53].

7.3   *Evaluation of a policy analysis*

Each policy analysis activity is based (implicitly) on values concerning the quality and purposes of the policy analysis. Therefore, policy analysis projects can be examined from different perspectives. This may lead to different opinions about success or failure, quality or shortcomings [30]. A substantively thorough and valid study can be unusable for a client. A brilliant and workable compromise that breaks a stalemate may be based on negotiated nonsense or may violate or manipulate the interests of legitimate participants. Conflicts like these are almost inherent in every evaluation of sizeable policy analysis projects. In the design and evaluation, the policy analyst attempts to cope as well as possible with these tensions and dilemmas, either by making choices or by finding new routes.

8   Conclusions

In this paper we have presented a model for policy analysis based on six archetypal policy analysis activities. This sub-division makes it possible to relate various policy analysis styles found in the literature to each other and to analyse the characteristics of and differences between the styles. Additionally, the activities provide pointers for evaluating policy analyses. By explicitly identifying which activities are being pursued with the policy analysis, it is possible to use that information as a basis for identifying success criteria for the policy analysis. The developed framework seeks to map out transparently the enormous variety of different types of policy analyses and to allow them to be viewed in relation to each other. The model can also be used to design policy analysis studies. By making explicit which activities are relevant in a particular policy analysis, a conscious choice can be made for a certain policy analysis style and the policy analysis methods can be selected in a well-founded way for the contribution made by the method or technique to the activities that must be carried out.

While the developed framework provides pointers for reflection, design and evaluation, it is not intended to be a rigid, prescriptive model. Rather, the intention is for the policy analyst to be consciously working on the goal of the analysis in relation to the policy-making process and to produce his own policy analysis design and evaluation.

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