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Evidence-based policymaking and the philosophies of science and politics: Philosophies in policy practice

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Evidence-based policymaking and the philosophies of science and politics

Philosophies in policy practice

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Public Administration: Public Management and Leadership

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Abstract

Evidence-based policymaking has gained in popularity and as a result science and politics interact more than ever. This interaction has been a topic of discussion, proposing that there is a philosophical conflict. This thesis attempts to find out if this apparent philosophical conflict occurs in the real world, something the scientific literature on this topic has not yet done. By conducting semi-structured interviews with practitioners on both sides of the interaction data has been collected to aid in answering the following research question; *“Does, and if so how, a conflict of philosophies exist in the world of policy practice?”* This thesis finds that there is a philosophical conflict in the world of policy practice between science and politics. Their philosophies are incompatible. This philosophical conflict however does not seem to affect the interaction between the two in their day-to-day work. In practice, they have pragmatically solved the conflict. Future research ought to interview a wider spectrum of politicians, for this thesis struggled to get responses from a wider range of political parties. There also ought to be more focus on the conceptualisation of concepts in the interviews. This will make interviewing less complicated.

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Chapter 1

1.1 Introduction

Evidence-based policymaking (EBPM) can be described as making policy that is based on scientific evidence. Stemming from evidence-based medicine and New Public Management (NPM), EBPM started to appear around the 1990s. First popularised in the UK and the U.S., the idea was to no longer base policy on political ideology, but on scientific evidence that showcases what works (Rouw, 2011; Head, 2008; Blunkett, 2000). Within EPBM there is an increased interaction between science and politics. Within this interaction, there is an apparent philosophical conflict according to scientific literature.

This apparent philosophical conflict between science and politics will be at the centre of this thesis. The literature states that science is more about ‘knowing’ (Rouw, 2011). By doing rigorous testing science can explain trends and phenomena in the real world. Politics on the other hand is more about ‘wanting’. It is more about power, conflict and a multiplicity of actors. This thesis attempts to find out if this philosophical conflict exists in the world of policy practice.

EBPM is a direct descendant of evidence-based medicine. Evidence-based medicine introduced the idea of basing the care of patients on scientific evidence. Combining the experience of the practitioner with scientific findings to make sure that the patient gets the best care (Cairney & Oliver, 2017). Many aspects of this way of work were imported into the EBPM approach. Using state-of-the-art evidence in policymaking to combat the wicked problems governments faced in the western world like the unsustainability of the welfare state.

NPM underlined the importance of using analytics and knowledge to increase performance in the public sector too. NPM is a group of ideas that rose to prominence in the nineties just like evidence-based medicine. NPM stressed using private sector management techniques in the public sector, like more hands-on management, output controls and use of competition (Hood, 1991). This also meant using the best evidence to make the government more efficient and effective, tackling old problems with science to find new solutions. This fitted well with the idea of EBPM. Improving government effectiveness by developing and using a more rigorous base of information and scientific evidence to guide decisions about program design, funding, implementation, and management (Heinrich, 2007). Policymaking based on political ideology alone no longer sufficed (Head, 2008). The interaction between science, especially the social sciences, and politics has increased due to the growing demand for scientific evidence to help construct policy.

Making policy in this way makes sense according to pro-EBPM literature. Basing policy on the best available evidence should work well in theory. And secondly, evidence-based viewpoints are difficult to oppose and resilient to political pressure (Leuz, 2007). A policy that is backed by strong evidence is

difficult to oppose if no evidence-based counter-argument is presented. Taking issue with evidence-based policy is politically dangerous too, why would a party oppose policy with a sound base in evidence? EBPM has gained in popularity, also in The Netherlands. In the second half of the 20th century the Dutch government got more access to scientific evidence thanks to the plethora of advisory organisations that were founded during that time (Krone, 2017). This interest in scientific knowledge has not decreased. In 2022 the Dutch government plans to spend 7.3 billion euros on research and development, which is almost double the amount the government spent in 2012 (Overheidsfinanciering van R&D | Rathenau Instituut, z.d.).

EBPM has its negative sides however when looking beyond the pro-EBPM literature. For example, when science plays too large of a role in policymaking this can affect the humaneness of policy, or it can ignore factors like historical commitment to a certain policy path. When policymaking is dominated by politics, it might become less effective or serve the interest of the few instead of the many.

The apparent philosophical conflict stated in the scientific literature is the cause of this thesis. The articles on this topic are many and interesting. Some argue that the conflict exists and is harmful, while others see it as a side issue with no real consequences. Other research stipulates that a conflict does not exist at all. This is what makes this topic such a difficult and interesting puzzle, worthy of further research. This thesis goes into these articles and displays what the discussion is about, going in-depth on where this debate came from and what the literature says about it today. Then this thesis will look into the practice of scientists and politicians to find out if the apparent philosophical conflict exists in the world of policy practice.

1.2 Scientific and societal relevance

While surveying the literature on this topic a gap can be found. While many articles discuss the existence of the conflict and go into the philosophical and practical frustrations this could cause, only a few take the step from theory to practice to find out if a philosophical conflict exists in policy practice. This thesis will strive to fill this gap in the scientific literature. This is relevant because it can help explain past and recent political events, and help predict future ones. It will also shed light on political decision-making. If the conflict is indeed observed in the real world, it may help explain why certain political decisions were made the way they were. Did the conflict alter the decision-making process, or made the process more difficult? If the conflict is observed in practice, this can be a great new lens to look at past events. A new way to analyse events and explain them. And if it is not present, future research can be done to explain how the apparent conflict in philosophies is solved in practice. This makes this research topic not only interesting but also scientifically important.

Not only is this thesis scientifically relevant, but also socially. Policy affects society and its people. It shapes their day-to-day lives, influences their decisions and changes their standard of living. With effects this large it is important that policy is made in a balanced and proper way. It must not disproportionately

negatively affect one societal group. By looking into the policymaking practice and the way science and politics interact within the policymaking arena, this thesis will try to clarify the effects this interaction has on society. Discussing the interaction may also help outsiders understand the policymaking process better. Since policymaking has such an impact on people, as established earlier, this process must be understood by the people. This thesis can aid in this understanding.

1.3 Research question

This thesis looks to answer the following question:

“Does, and if so how, a conflict of philosophies exist in the world of policy practice?”

To answer this question the next chapter will go into the concepts that are at the centre of this thesis namely EBPM, science and politics. This theoretical framework will explain them and their philosophies. Then, the role of science and politics in policymaking will be discussed by using three different lenses. A lens where science is in the lead, one where politics is and one where both contribute equally. The chapter ends with a short description of what the use of evidence in politics looks like today. This will give a great insight into what to expect in the interviews, can some of the theory be recognised in practice?

By conducting interviews with both political and scientific practitioners this thesis attempts to find a connection between theory and the real world. Is there a philosophical conflict in the world of policy practice? Using the interviews the analysis will go into three things. Firstly, what does the policymaking practice look like according to scientists and politicians? Secondly, the underlying philosophical notions behind their view of the policymaking practice. And finally, if there is a clash between these philosophical notions. This thesis ends with a conclusion that will summarise the research process and then answer the research question. Followed by a discussion. But before the research question can be answered, the concepts central to this research have to be discussed.

Chapter 2

2.1 Theoretical framework

The theoretical framework will go over the three main concepts, starting with evidence-based policymaking. How did it evolve from evidence-based medicine and what does evidence mean in this context? Second, the philosophies of science and politics will be discussed. The debate on what counts as science will be highlighted, and what definition of it will be used in this thesis. The philosophy of politics is analysed by going into the main concepts that define it. After this, the framework continues with how these two philosophies relate to each other and the role they play in policymaking. This will be done by using three different lenses. This chapter ends with a description of the interplay between science and politics in the real world. To understand the literature better it is important to note that most of the literature used in this thesis is advocative. Articles explain how things should be, and give

recommendations on how to get there. They will highlight dangers in opposing literature. This will become apparent in the chapters on science and politics in the lead.

2.2 What is evidence-based policymaking

The scientific literature on EBPM explains how it roughly contains two parts, namely the use of rigorous research methods and finding credible evidence on what works. The goal of EBPM is to make sound policies to improve conditions for society. The roots of EBPM lie in the world of medicine (Baron, 2018). Using randomised controlled trials became popular in this field after the second world war. Large swathes of data were collected on the effects of medication and vaccination. No longer focussing on what professionals thought worked, but finding out what actually works. This new trend was dubbed evidence-based medicine. After seeing the incredible successes of this approach in the field of medicine (Baron, 2018), the trend quickly become popular in the field of policymaking because of its modern emphasis on rational decision-making and economic effectiveness (Head, 2008). In policymaking, evidence-based means policy decisions should always be based on the best available evidence (Baron, 2018). But what are these rigorous methods, and what would count as evidence for EBPM and the scientific field of policymaking?

As Head introduces in his 2008 article evidence, in the context of policymaking, is knowledge generated through applied research. Undertaken in the government agency setting or outside of it (p. 4). With applied research Head means research methods like randomised controlled trials (RCT). He specifies that also other kinds of research are useful in the context of policymaking. RCT's however are the gold standard. The evidence acquired through research helps explain broad trends, interpret social and organisational concepts or create specific evidence for a certain topic.

What rigorous methods are in the world of policy practice is explained in the work of Hoppe (2002). Research is three layered he introduces. Man uses general concepts, observes special circumstances or facts and connects these through inferential procedures. All three of these layers are subjected to strict rules and protocols that are imposed by the scientific community one operates in. Concepts need to be precise and clear. Observations need to be standardised and reproducible by others. The inferential procedures need to be based on well-operationalised concepts that fit with what is being observed. These rules together have one goal, to produce singular evidence that is testable. This is ultimately the goal and philosophy of science as well, to produce evidence through procedures to best explain the world as it is.

The introduction of rigorous testing techniques in social sciences went gradually. Incorporating these techniques was more difficult than initially expected finds Albaek (1995). Scientists were naïve according to Albaek. They thought that, when they got access to the policymaking table, they would make better choices than previous decision-makers. They were led by the latest evidence after all. However, the political-administrative decision-making process was more difficult and dynamic than

expected, explaining why EBPM was slow to get off the ground (Albaek, 1995). Critics of EBPM thought that it would be impossible to conduct research large enough to effectively say anything about a population as big as a country (Baron, 2018). It was deemed unachievable to set up trials that large. This was proven wrong when in the early eighties massive randomised controlled trials were held in the U.S. to collect data on welfare programs (Baron, 2018). EBPM experienced its real boom in popularity with the rise of NPM. NPM pursued effectiveness and efficiency of the public sector at a time of growing government spending. The welfare state had become too expensive and slimming down was necessary. This could be achieved by innovative analytical frameworks based on scientific evidence to tackle problems. This created a chance for the sciences, and especially the social sciences, to deliver knowledge on how to gain control over big problems public sectors faced like the ballooning costs of running the welfare state (Head, 2008). To better understand the roles science and politics play within EBPM it is important to go into what science and politics are precisely. This thesis will do this by going into their underlying philosophies. They will help explain their roles and characteristics.

2.3 Philosophies of science and politics

There are two main players in EBPM, politics and science. Chapter 2.3.1 will discuss the philosophies behind them. It is important to go into their philosophies because this thesis is about the apparent philosophical conflict between them. If the underlying convictions of the two worlds are looked at more closely, the conflict perhaps can be explained. Before this research can go further, it looks at these two philosophies and why they are in apparent conflict.

2.3.1 Philosophy of science

Firstly, science. As stipulated in the literature science is about knowing (Van Montfort et al., 2008; Rouw, 2011). It is about gathering evidence through rigorous testing and observation using a systematic approach. This approach is subject to rules and protocols which differ from field to field. This meticulously gathered evidence is then used to explain real-world phenomena and trends. Feyerabend (1978) states that when discussing science two questions come up; what is science and what is so great about science? The first question is yet to have a definitive answer. It is about how science works. How do its standards, procedures and results differ from other fields? For many people, this question has a different answer, so what exactly is science then? In the literature this debate is often called the 'demarcation problem'. It refers to the discussion about what counts as science and what does not. It quickly becomes evident that there are a plethora of interpretations of what science is precisely.

Early logical positivists or empiricists initiated the discussion in the early modern European era. They found that the difference between science and non-science was observation. All science is based upon observation and only theories that are verifiable by observation hold any meaning. This entails that fields like ethics and metaphysics were not scientific according to this philosophy because they are based on concepts one cannot observe. They stipulate how there is only one science, and everything else is

pseudo-science (*Logical Empiricism (Stanford Encyclopedia of Philosophy)*, 2022). This view was quickly critiqued and new definitions were formed. Karl Popper (1968) introduced that something is science when it is falsifiable. Statements that are testable separate science from pseudo-science. No positive test outcome can prove a theory, but one counterexample is fatal. Feyerabend (1978) opposed the very discussion of the demarcation problem. He argued that philosophers discussing the demarcation problem were merely trying to solidify a superior position for science in this way. Science does not deserve this 'special place' other philosophers have in mind for it he explains. Throughout history, almost no rule or finding has not been proven wrong or ignored to reach new knowledge. The breaking of protocols or procedures is needed for scientific advancement, therefore making science just as unpredictable as non-science. This loops back to the second question that comes up when discussing science, namely what is so great about it? That question is not up for debate at all Feyerabend (1978) finds. The hegemony of science is unchallenged. In almost all facets of modern society, it dictates what is right and what is wrong. He elaborates that this counts for all sciences, from physics to the social and health sciences. The power science has over modern society is greater than the power the church had over medieval society in Europe Feyerabend claims.

Again, it is clear that there are many different interpretations of what science is precisely. It is difficult to explain what the philosophy of science is if the very definition of it is debated. In order to establish what science is for this thesis the work of Knorr-Cetina (1999) on epistemic cultures is introduced. The concept of epistemic cultures poses that the definition of science differs per field. What counts as science according to physics can differ greatly from what sociology thinks science is. Scientists are groups of people who work together and are strongly separated from other scientists along the lines of their fields. They follow different rules and are interested in finding different things. These fields have dissimilar empirical approaches and standards to uphold. This is comparable to the way different cultures operate in the social world. Separated groups with their own interests, traditions and values. This diversity in fields and approaches to science is a direct countermovement to what the early logical positivists thought. There is not 'one' science and 'one' scientific method but multiple, depending on the field. This may disunify science but it does not erode it. It simply means that each field has different wants and needs when it comes to science and the scientific method. As a result, each field has created a form of science that fits their needs and helps them reach their goals best. What science is according to this thesis and the working distinction between it and politics will be discussed in the analysis. The interviewees gave a clear description of what science is in the field of public administration.

2.3.2 Philosophy of politics

Politics on the other hand is more about 'wanting' (Van Montfort et al., 2008). It is about shaping the world to your liking and achieving this by using strategy, power and conflict. In politics, there is not one true interpretation of knowledge but multiple, using it strategically in a story or a frame. Political decision-making is knowing and judging political matters with common sense forms of knowledge.

Dealing with per definition controversial concepts observed in a heavily context-reliant world, and the connection of these two via constant debate between politicians (Hoppe, 2002). Politics struggle with problems that science does not have. For instance, it is home to a multiplicity of actors, almost anyone can take part in it. As a consequence all concepts are controversial. Another politics-specific problem is that it is not only about decision-making. The decision-making is influenced by power and staying in power. This influences the way decisions are made and begs the question if not all decisions are made with power in mind. It makes any decision made competitive, and favours purposefully neglecting available evidence or using evidence strategically. Lastly, politics struggles with the ‘can do attitude’ problem. If a decision has to be made quickly, this is going to affect how carefully evidence is going to be reviewed. Here, evidence plays just a minor part in a bigger ‘game’ (Van der Eijk, 2018). Multiple authors see multiple different concepts at the heart of what politics is. Power, conflict and the multiplicity of actors are mentioned the most this thesis finds. These concepts will be discussed here to better understand what politics is and the philosophy behind it.

Robert Dahl sees politics as any persistent pattern of human relationships that involves, to a significant extent, power, rule or authority (Dahl, 1976, p. 6). This means that many different interactions between people are in some way political. Political power is roughly speaking person A getting person B to do something that he or she would normally not do (Dahl, 2007). This power can stem from many different things. Van der Eijk (2018) formulates a list of sources of power, for this thesis the most important one being control over knowledge and information. Having access to information can ensure a victory in debate.

A second concept often described to be at the centre of politics is conflict (Van der Eijk, 2018). Politics is often about views that are incompatible with each other and the battle that ensues, with the goal of making your view dominant. A conflict is shaped by different factors including the actors involved, the historic evolution of the conflict and what is at stake. The size and difficulty of a conflict dictate what way the actors operate. If speed is of the essence other strategies are employed than when actors have time to plan. This will influence in what way actors will use power and scientific evidence. Conflicts on the nature and size of problems and their solutions are at the centre of politics (Michels, 2008). Political powers battle each other to solve problems and get things done.

The third most used concept is the multiplicity of actors. As introduced by Hoppe (2002) almost everyone can take part in politics. This means that every different actor comes with a different perspective. This causes conflict and makes deliberation difficult. With a large number of views on a subject, information becomes even more important. With the right information, one can quickly see which views are compatible with yours and which ones are not.

It is important to add the following. This thesis uses a Western European outlook on politics. This is important to mention since it makes the topic possible. If instead the political system of dictatorship was

used the conflict between science and politics would be a non-issue. The political system would always be on top, and the scientific community would be a servant of the state. In the Western European outlook on politics, science can play much more of a role however. The system can't outright silence or ignore the scientific community. It has to at least listen to different viewpoints to remain credible and ensure democratic success.

2.3.3 Conflict of philosophy

To conclude this section, a summary. Politics is more about wanting. At its core are conflict, a multiplicity of actors and power. Science is about knowing. It strives to produce useable evidence which fits the scientific criteria of its epistemic community, to better understand the world and explain phenomena that fit within its scientific culture. Paramount are protocols and rules which have to be followed. Politics on the other hand vies for the resolution of conflict and the victory of a personal standpoint in a world of high dynamism. Science is not concerned with winning or rhetoric but with finding out what is true. This causes a philosophical conflict between them. High dynamism and power struggles do not fit well with the rules and protocols of science. And there is the problem of differing time paths. Often science takes its time and cannot be rushed, while in politics when windows of opportunity open one has to act fast. These tense relationships between scientific knowledge and politics can and have been interpreted in different ways. This thesis will now go into how the literature looks at the roles of science and politics in the policymaking process.

2.4 Role of science and politics in policymaking

This part of the theoretic framework will be structured as follows; first, an interpretation of EBPM will be discussed where science plays the leading role in policymaking. Second, section 2.4.2 will explore an interpretation where politics is on top. Lastly, a more mixed interpretation will be presented, where both science and politics play an equal role in making policy. Let's discuss those three interpretations of EBPM here.

2.4.1 Science in the lead

The first and narrow interpretation suggests a clear-cut relationship between science and politics within EBPM. It states that the scientific community creates and delivers indisputable evidence and this evidence is an objective base for policymaking (Nutley et al., 2007). Here one can recognise the philosophical notion of science creating evidence through the strict following of rules and protocols. In his typology of the relationship between policy and science Hoppe typifies this as a technocracy (Hoppe, 2002). In a technocracy, the scientific community is in command and policymakers accept all knowledge produced without further weighing or debate. There is a scientific 'dream' that a group of objective and free scientists speak 'truth to power' and directly tell policymakers what to do (Hoppe, 2008). Public institutions and persons have to understand that this is the best way to make policy, showcasing the advocative nature of the science in the lead lens and the corresponding literature. By giving advice based

on evidence to public actors, scientists keep the policymaker to a higher standard (French, 2019). The gathered evidence is not created for politicians to debate over, and decide if it is useable or not. They should use the evidence the authors behind this lens propose. This approach blames politics for any non-take-up of evidence. It is not up to the producer of evidence to showcase why evidence is useful, it is up to the consumer of evidence to know that they should. It is certainly not the case that the scientist timed the delivery badly, or that the results are incomprehensible for a layman (French, 2019). According to this interpretation science follows a strict path, from producing to applying knowledge. The first step, producing knowledge, is the most important one. Here the concrete base for policy is built by gathering evidence through the scientific method. The other steps, for instance the interpretation and translation to policy steps are mere afterthoughts. Again underlining the philosophy behind science, evidence creation through strict adherence to rules. Evidence enters the world without a frame and interpretation is not necessary according to this lens. Policy translation is clear too, one just has to apply the evidence to the real-world case.

As the ‘science in the lead literature’ admits, this lens is an ideal type with many oversimplifications and problems (Rouw, 2011; French, 2019). It is important to remember that most evidence is less useable without correct interpretation. Findings struggle to make a difference without being translated into policy. Think about climate change for instance. Evidence showcases that man ought to lower the emission of greenhouse gasses to save the planet. But the translation of these findings into policy is still needed. The finding itself does not change the world, but its application in policy does. Instead of directly applying evidence to policy and real-world problems, political interpretation and translation are necessary. For tacit knowledge, political savvy and experience are needed.

Another problematic assumption is that the steps on the path of science happen in a world separate from the policy world. This separation of worlds is detrimental to the quality of policy produced. It stops input from policymakers and politicians entering the evidence-gathering stage. Their experience and knowledge go unnoticed. As discussed in Edwards (2005) gaps and miscommunication between these two worlds can cause useable knowledge to be overlooked. Researchers and politicians are from two different communities this lens stipulates. And this idea of two communities is the explanation for why there is as much ‘non-take-up’ of evidence by politics as there is. The differences between these communities are multiple. They work with different time horizons, have different standards for the validity of evidence and science does not struggle with having to be responsive to the voter (Weiss et al., 2008). This makes their cooperation difficult.

Van Montfort (2008) explains how this view can escalate to seeing scientific inquiry and policymaking as the same thing. Scientific evidence is absolute and should lead all policy considerations. Knowledge is not framed or used in any frame and it enters the world without any label. In this interpretation policy that is not based on scientific evidence is based on something nefarious like self-interest, power, personal

ideology or co-optation by the elite. These concepts pose a threat to fair policymaking if politics is left to its own devices. They should not play a role in policymaking according to this lens and instead focus on the principles of scientific rigour. It does seem however that this interpretation tends to ignore concepts like public opinion, historical commitment to a policy path and compassion (French, 2019), oversimplifying the process of policymaking.

An EBPM interpretation where science is strongly in the lead can be politically dangerous too (Triantafillou, 2015). If science were to dictate which policy option is best, this would curtail the freedom of public decision-makers to choose between policy options. The public administration no longer has the freedom to choose their instruments, they simply apply knowledge passed down to them by researchers. As a consequence, the chosen policy option might be the most scientifically desirable but not the best for the citizens it intends to help. An example of this will be given in the analysis in the form of a workforce reintegration story. It might lack compassion or neglect historical commitments made. It could go against the expected pattern of the government which will surprise citizens or lack a human touch. Weiss et al (2008) continue this train of thought by underlining how directly following conclusions in evidence does not consider local differences and neglects professional discretion. What the evidence says works for the entire country might setback many people, the truly average citizen does not exist. By neglecting professional discretion the ambition of the policymaker will be curtailed as well (Weiss et al., 2008). Curtailment of discretion leads to an undermotivated and eventually understaffed public administration (Buffat, 2013).

2.4.2 Politics in the lead

Hoppe's typology of the relationship between science and politics also introduces the engineer model (Hoppe, 2002; Nilsson, 1992). The exact opposite of the technocracy model, now politics is in the lead. Politicians already have an ideal policy in mind when scientists are hired. These scientists then design the ideal policy based on evidence for them. Evidence plays a legitimising role for the policy, supporting the idea that it is best. Evidence also has a substantiating function, granting credibility since the policy is now backed by science. Evidence also protects politicians when high-risk decisions need to be made. When the decision backfires, politicians can argue they did what the numbers said and that it is not a political blunder but a scientific one (Boswell, 2009). One can see how the philosophy behind politics starts to show here. Characterised by conflict, it is important to support your policies well and defend them with evidence against the opposition. The typical political concepts of power, the multiplicity of actors and conflict are the driving forces behind the way evidence is used. Evidence is an instrument to convince opponents you are right or to point toward the urgency of a topic. As Michels (2008) puts in her article, this causes scientific knowledge to be used selectively, that symbolism and framing play a large role in the use of knowledge and that knowledge can have a legitimizing function. Politicians accept that sometimes the evidence is better to be ignored for the sake of progress in the policymaking process. Evidence in this interpretation is used for symbolic or framing purposes. By interpreting data

politicians can shape evidence to fit their narrative. Humans shape their view of reality by using certain language or eliciting certain emotions. This means that scientific findings can be moulded. Not the findings themselves, but the way they are perceived. This can be done by using symbolism, stories, framing or rhetoric (Yanow, 1997). Here again, the philosophy of politics is visible. Strategically using evidence to manage the conflicts and power struggles that typify politics. Evidence does not appear on the stage interpretable in one single way with no prior convictions or values, but with a preconceived idea of what it is going to be used for. It is gathered for a reason. Simply researching a certain topic already means that someone has something to gain from that research and evidence (Stone, 2012).

Politics plays a larger role according to this interpretation. It states that evidence does not provide solutions, it provides ideas and visions for policy. Translation is then necessary to arrive at the actual policy. Translation is done by using 'touch, feel and intuition' (Colander & Kupers, 2014). Making good use of evidence requires political savvy. One has to know when to use what knowledge to be effective. To face the complex nature of political problems some of the scientific standards need to be abandoned and replaced by more tacit knowledge and experience. This interpretation argues that real-life policymaking problems are too complex to give any sort of starting point for scientific research. The scope of most political problems is not clear. Where would research begin and which variables should it consider? This question is difficult to answer which creates problems for the role of science in policymaking. No scientific research can be done on a political topic without it either not fulfilling the strict rules science adheres to or being large enough to actually be useable in the policymaking arena (French, 2019). To create evidence scientists must make difficult and dynamic concepts measurable. Otherwise how else could clear evidence be produced? The problem is however that politics deals with vague and disputed concepts like fairness, equality and happiness. These concepts are difficult to quantify and even more difficult to scientifically conclude anything about. So how can science contribute to solving complex social issues if it cannot fully measure the concepts involved (Triantafillou, 2015)?

Again this lens has its complications. This engineer model is an ideal type as well. When politics has the upper hand, not knowing is sometimes just as important as knowing. As a consequence politics will 'spill knowledge' or wilfully not use it. This means not all available knowledge of a subject is used, which can cause erroneous outcomes. By using evidence selectively and pushing certain agenda-fitting evidence politicians try to best each other in the political arena. An example of this is the 'Betuwelijn' (Michels, 2008). When the evidence concluded against an already made decision, it was simply not used or talked about. In this case, scientific knowledge has lost its real value and is only there to either be ignored or used to support sometimes already-made policy decisions. In this interpretation, evidence is merely a weapon. A way for the current establishment to suppress and silence opposition. Ignoring certain findings and promoting others may cause a one-sided policy that benefits the current

administration's chances of re-election or staying in power. Evidence in this case is used to hide ideology behind and does not help create better policy (Newman, 2017).

2.4.3 Perhaps a duet? Interaction between science and politics

The more narrow interpretations can be dangerous. Having either politics or science strongly in the lead within EBPM can cause many problematic situations as described above. Take science in the lead for instance. This interpretation ignores concepts like compassion, historical commitment to a policy path and public opinion (Van Montfort, 2008; French, 2019). It removes the human element from policymaking. In the political world where values are contested and sources of information compete with each other, it is important to have human policymakers judge the evidence. Feyerabend elaborates on this. He writes; 'it would not only be foolish but downright irresponsible to accept the judgement of scientists and physicians without further examination' (Feyerabend, 1978, p. 96). Proper screening is required, and for this screening tacit political knowledge and experience are necessary. When this does not occur policy becomes inhumane and compassionless. As a respondent put in her interview; 'If you follow the numbers and solely the numbers, you create policy for the average citizen. But that average citizen does not exist'. No one neatly fits that description, which causes the policy to not fit with anyone particularly well. However, politics leading and science being merely an extra in the movie of policymaking is unwise too. (Hoppe, 2002; Van Montfort 2008; Van Montfort et al., 2008). In this interpretation policy is subject to personal preference, ideology and serving the interests of the few instead of the many. Evidence is wilfully ignored to make findings better fit a political narrative.

To summarise the struggle it is helpful to look at the literature on the 'two-community' problem again (Caplan, 1979; Weiss et al. 2008). This theory tries to explain how knowledge is utilised in policy, and it finds that the difficulty in interaction is caused mainly by the two-community problem. It introduces how the relationship between the researcher and the policymaker is the deciding factor in how evidence is utilised. Living in separate worlds with different languages, conflicting values and goals impedes evidence from being used effectively. To bridge this gap mutual understanding is necessary. Both 'worlds' ought to be more informed about the other. The scientific community can help with making decisions on micro-level or 'easily interpretable' problems. On macro-level decisions, the scientific community can help the political world by pointing out what policymakers need to know and giving summaries of the latest findings. Or by helping them decide which aspects of policy can be evidence-informed, and which aspects could be informed by tacit knowledge and political savvy (Caplan, 1979). The two worlds have unique points of merit and it is only in accepting the value of each perspective that progress can be made (Newman, 2017).

A less linear interpretation exists too. Where the dividing lines between science and politics are less clear and there is more interaction. This interpretation takes into consideration the often unpredictable nature of politics. This lens explains how the two worlds 'challenge' each other to create the best

possible policy (Marmot, 2004). For policymakers, this model means that sometimes ignoring knowledge is best for making good policy. Instead, they use experience and everyday knowledge to battle political dynamism. On the other side of this the scientific community does not simply ‘evidence dump’ their findings but uses their knowledge at the right opportunities to maximise its impact. This interpretation requires both worlds to adapt to each other while also keeping their characteristics. Scientists blame politicians that they do not ask the right questions, and do not use their evidence in the way it was intended. Politicians blame the scientific community that they do not time the delivery of evidence and that it is incomprehensible for the layman. These problems are solved when both worlds adapt themselves to interact better.

To conclude, for cooperation to flourish each world has to accept the other and strike a balance. As Marmot states in his article (2004), a balance has to be found between what the evidence shows and its policy implications. In the act of making policy, many different interests will be taken into consideration. Interests like risk analyses, cost-benefit analyses, historical commitment to a policy path and how the policy will fit with public values. As long as the scientific evidence is weighed in the same fashion as other interests policy will have the best of both worlds. This lens hopes to see cooperation most of all. And an acceptance of each other’s weaknesses and an understanding of each other’s strengths. Evidence can only be used in policymaking when the scientific community and protocols are understood (J. A. Weiss, 1976). This showcases how a better understanding of each other can help the interaction. Weiss elaborates that initially, scientists were rather disappointed with how much science was able to affect policymaking. This was caused by the fact that it was not yet clear what kind of evidence would be useful, and how it could be useful. The solution was a better grasp of how science and politics were supposed to work together (J. A. Weiss, 1976). This is an ongoing process, one this middle-of-the-road lens tries to underline.

These three lenses on the role of science and politics in policymaking have presented interesting questions and views. The lens with science at its centre explains how the role of science in policymaking cannot be large enough. By using the best available evidence which is gathered through rigorous methods, the best possible policy can be crafted. This approach ought to be careful, however. Having science in the lead can cause inhumane but scientifically logical policies to be preferred.

When politics is in the lead evidence is more a means to an end, an ally or adversary in the political arena. Evidence is used in stories and frames, or sometimes strategically not used at all. This second lens has to keep in mind that this way of work can cause policy based on political ideology and personal preference to win over more equal and fair policy.

The middle-of-the-road lens explains how both science and politics ought to work together in policymaking. Both earlier mentioned approaches have to accept that they have flaws that can be mitigated by understanding each other. Science cannot do without the deliberative character of politics

which prevents inhumane policy. Politics cannot construct sound policy without knowing the effects of certain actions on society which will prevent unequal or unfair policy. It is important to keep these convictions of the lenses in mind when going into the analysis. Are certain lens characteristics recognised in the real world, do they actually occur?

2.5 Theory in practice, the interplay between science and politics

The theoretical framework has gone over the philosophies behind science and politics, and their possible ways of interaction through three different lenses. Now it is time to look at the world in practice. What does the theory say about the interplay between science and politics in the real world, what can be expected?

To explain this interplay it is important to first set the scene for evidence use. Caplan (1979) introduces three levels of policymaking, and all three levels use evidence differently. At the micro-level, evidence is often used after the fact. To test the acceptability of already established programs or to track the progression or retrogression of a certain policy. Here evidence is used as an ex-post check and evaluator. At the intermediate level, evidence shares the stage with ‘extra-scientific’ knowledge (Caplan, 1979). These two types of knowledge combine into a perspective that is applied to policy. At the macro-level, or national level, evidence use is the most difficult Caplan (1979) concludes. It is challenging to find evidence that is significant enough at the macro-level to assume its correctness. Besides this, conducting research and collecting evidence at the macro-level is costly and time-consuming. However, at this level evidence is also the most important. Here it affects the most people and the biggest decisions. Caplan (1979) explains that to overcome this problem, a set of arrangements needs to be put in place. Where scientists can share their knowledge with decisionmakers in a cooperative way. Scientists cannot solve the policy problem for them, but they can guide them toward the most relevant evidence and useful findings. In that way, decisionmakers use their tacit knowledge, strengthened by the best available evidence. Evidence plays a more supportive role at the macro-level.

Weiss (1979) sees seven distinct ways of using social science research in the sphere of public policy. This section will quickly go through all models here. The knowledge-driven model is similar to the ‘science in the lead’ approach. The fact that knowledge exists presses it toward development and use. The problem-solving model follows a different path. A problem arises and a policy solution needs to be made. Science is called into action to deliver evidence on what the best decision is, comparable to the ‘politics in the lead’ approach.

The interactive model describes a chaotic interaction between science and politics. Here, problems and solutions all exist next to each other and at the same time. A lot like the garbage can model (Cohen et al., 1972). It is up to the policymakers to find the relevant evidence and answers for their problem. The political model describes a system that is similar to the ‘politics in the lead’ lens as well. In this case, the political positions around a policy problem are already taken based on political views. Because of

constant debate opinions have hardened and decisionmakers are unlikely to move from their position when new evidence is introduced. Evidence now plays the role of weapon, used by the side which agrees with its findings to silence the opposition, even if this requires taking conclusions out of context. One can recognise the philosophy behind politics here too. To better face the constant conflict and power struggle that characterises politics, evidence is interpreted and translated.

The tactical model describes how evidence is not used at all, a form of symbolic politics. Here evidence is a way to signal to actors in the policymaking arena that ‘we are working on it’ because research is being done. But in fact, the research is strategically planned and delayed, waiting until the storm has blown over. This strategy is often employed to nip a conflict in the bud, showcasing again how political philosophy returns here, where dealing with conflict is an issue. The enlightenment model sees evidence as the changer of views entirely. Evidence is not used directly per se, it shapes the very way one looks at a problem. The social sciences change the way problems are defined and tackled, by changing the views of players in the policymaking arena. This fits with the science in the lead lens well. Evidence ought to be used, and singlehandedly tackle problems. Scientists speak truth to power, they change the way problems are handled. Lastly the intellectual model. This model sees social science and the gathering of evidence as something a virtuous society does. The use of evidence is a part of society, which also means a part of policymaking. Not using evidence is out of the question. Again this model incorporates aspects of the science in the lead lens. It is a given that evidence is used, and policymakers need to realise the benefits of evidence use.

Presented above are ten different ways to look at the interplay of science and politics in practice. Giving an idea of what the use of evidence in policymaking looks like. In the analysis, there will be attention for which of these models can be seen in the real world to grant a better understanding of the interaction between politics and science.

After the theoretical framework, a few things are now known. It has gone into the philosophies behind science and politics, and what evidence-based policymaking is precisely. It is now known how science and politics could interact and what role they play in this interaction, after looking at science and politics in the lead and the duet lenses. There is also a better understanding of what evidence use is like in the real world according to scientific literature. Now it is time to go from theory to practice. What is the policymaking practice like according to the professionals who work in this field? What is their take on the philosophies behind science and politics? And is there a philosophical conflict in practice? Before these questions can be answered however, the next chapter will go into the methodology of this thesis and give an insight into how the research was conducted.

Chapter 3

3.1 Methodology

As stated in the introduction this thesis will look into the apparent philosophical conflict between science and politics and attempt to answer the research question. By performing interviews this thesis combines fieldwork with theoretical work. This fills a hole in the scientific literature.

The data collection is based on qualitative methods. Semi-structured interviews with politicians, policymakers and scientists provided the material which will be studied. Presenting these people with questions on the philosophical conflict produced insights into this conflict from a practitioner's point of view. By reviewing the answers this thesis will then conclude if the apparent philosophical conflict as stated in the scientific literature is observed in the real world or not.

The more free style of semi-structured interviews allows for a variation in main questions. Follow-up questions and prompts were used to draw the interviewee into the topic more. Semi-structured interviews are especially useful in this case since the concepts central to this research are broad and not easily operationalised. This style of interviewing allows for a more open conversation where the meaning of concepts can be discussed based on personal experience. By asking open questions at the beginning of the interview an understanding of the day-to-day of the interviewee is formed. This understanding is then used in the middle part of the interview where the questions become more specific. By relating these specific questions to their work environment, and letting the participant explain the concepts in that frame, difficult concepts are more easily defined and studied (Galetta & Cross, 2013).

To answer the research question both sides of the conflict were interviewed. The interviewees were selected on their familiarity with both worlds. This makes sense since one must work within the interaction between science and politics to say something about it. Via personal connections and reaching out online, the eventual respondents were contacted. The interviews were around 40 to 45 minutes long and were mainly done in person.

On the political side, the interviewees have experience with political dynamism and possess knowledge of how policy is constructed. They also know what role evidence plays in the policymaking process. This makes them ideal to be interviewed for this thesis, and why they were chosen. The diversity of governance levels ensured a broad understanding of the political world. From the most local to the national level.

On the science side, a diverse group of respondents was gathered as well. University professors and members of political party research bureaus. The researchers at the political party research bureau's fit well with the topic. While they know the intricacies of the political world, they also have experience with the scientific method. These people were therefore able to provide a great insight into the world of policymaking practice. The university professors fit well too. They possess extensive knowledge of the

scientific method and are at the forefront of evidence creation. The table below offers an overview of all interviewees.

Politicians	Scientists
1. Political party staffer in Second Chamber	1. Professor at Leiden University, Public Governance and Civil Society
2. Political party staffer in Second Chamber	2. Professor at Leiden University, Administrative and Political Theory
3. Politician in the Second Chamber	3. Researcher at a research bureau of a political party
4. Political party chairman Leiden Municipality	4. Researcher at a research bureau of a political party
5. Political party chairman Leiden Municipality	5. Director at a research bureau of a political party
6. Political party chairwoman Leiden Municipality	

The interview questions for both fields were held the same as much as possible to make their answers comparable. To find out if a philosophical conflict exists in policy practice, it is important to go from theory to practice. The questions were therefore based on the theoretical framework. Establishing the existence of interaction was the first step. That is why the interview began by asking how important science or politics is in day-to-day work. The answers to this question offered an explanation of what the interaction was like to test for any conflict and provided examples to use later on. The questions continued by asking when, why and how important the interaction was. In this way the theories of science in the lead, politics in the lead and the duet lenses could be tested. The interviews ended with a question on philosophy. Firstly to establish what the underlying philosophy was of either politics or science. Secondly, to test if there is a philosophical conflict between the two worlds in the eye of the interviewee. The questions tested the theoretical framework in practice, and the results will be presented in the analysis. The interview guides with all questions are in the appendix.

After all interviews were held and transcribed, they were coded. This made it simpler to find overarching themes in the interviews. The codes were made based on the theoretical framework and what this thesis aims to test. The coding process creates an in-depth understanding of all the interview data and makes the interviewer familiar with all that was said. This makes finding the passages one is looking for easier and quickens the analysis process (Deterding & Waters, 2018). Additionally, making an overview of all codes in a table makes this research more transparent and reproducible. The code table is in the appendix as well. The codes are modelled after the technique proposed in the work of Deterding and Waters (2018).

Some limitations of this study should be acknowledged. Firstly this research has been done exclusively in The Netherlands. All respondents work in Zuid Holland. This makes the generalisation of the findings

difficult. Many countries have different political systems, and that might alter the outcome. To tackle this limitation research on a much grander scale is necessary. Some nuance is required here however. It is important to note that generalisation is possible from a single case and that it depends on the case and the case selection (Flyvbjerg, 2006). Because of the careful case selection of this thesis, speaking with municipal and national level politicians, and interviewing party scientists and professors generalisation is perhaps simplified. Secondly, this thesis relies solely on qualitative data. This raises the concern that research bias plays a factor. Even though this problem can be tackled by using an interview structure, which this thesis did, it still cannot be prevented in its entirety. Third, this thesis works with difficult to conceptualise concepts. Though thorough work has been put in to make sure the concepts were as meticulously conceptualised as they were here, still respondents can interpret a concept differently. This affects the validity of this research and makes generalisation more difficult. Lastly, the topic of this research is a politically delicate one. This means that the chance for socially preferable answers is higher. This can affect the outcomes of this research and lower the validity as well.

Chapter 4

4.1 Analysis

The analysis will begin with the first step, which is looking at the policymaking practice. For clarity, this will be done first from the politicians' point of view, followed by the scientist's point of view. In this description of the policymaking practice, certain role conceptions for science and politics in policy practice will appear, and those will be discussed. That is the next step. Behind these role conceptions are certain philosophical convictions. The third and final step will be looking at these philosophical convictions to conclude if there is a conflict between them. And in that way attempt to answer the research question. This chapter will start by looking at what the policymaking practice looks like using the interviews.

4.2 policymaking practice

The interviews have helped to better understand policymaking practice and how science and politics interact within this process. What does the policymaking practice look like from the politician's and scientist's point of view, and what are important points to mention? At the end of each chapter, there will be special attention to how it relates to the world of policymaking practice as described in the theoretical framework.

4.2.1 Politicians in policymaking practice

Everything mentioned in chapter 4.2.1 has come from the interviews. The interviewee's answers provided the data for the following paragraphs.

Policy has to have a starting point. All politicians interviewed underline how they try to base their policy ideas on scientific evidence as much as possible. They agree that science creates true evidence, and they trust the scientific community to follow their own rules and protocols while creating this true evidence.

'I think that we are a political party where scientific facts, findings and research are very influential for every decision that we make'

- Political party member for the municipality of Leiden

Many political party members do not feel comfortable with having viewpoints or policy ideas based on political ideology alone. There is a multitude of reasons for this they explained. First of all, an evidence-based standpoint is more difficult to oppose, for it requires an evidence-based counterargument. It also gives a standpoint extra credibility. Scientific evidence acts as a foundation of policy they mention, on which to build. Or it can be a giver of ideas and in that way be a foundation as well.

An example of evidence working as an idea giver and foundation is the publishing of poverty numbers each august by the CPB. These numbers are published right before the purchasing power debates. The numbers the CPB publishes help political parties negotiate with one another. It allows them to steer based on these numbers. They can tell their colleagues that if a new policy does not decrease the numbers on topic X to level Y, they cannot agree with the policy. Here, evidence acts as a foundation of debate. A starting point for discussion and an idea giver of where to act and what to change. Another example by a politician at Leiden municipality shows how provincial-level research on housing needs helps make decisions on a new policy. The research found that in Leiden there is a need for studios and one-person homes. Using these findings, the interviewee was able to better explain what the city needed in municipal-level debate, offering ideas on how to tackle the housing issue.

Basing policy on scientific knowledge requires more than solid evidence alone however, according to the politicians interviewed. In the policymaking process, there is also careful political translation and interpretation. The 'next step' in the process. As many of the political interviewees stressed scientific evidence becomes even more useful when it is properly translated into a story, frame or one-liner. As one interviewee put it;

'When you have the numbers, you have a strong position. But when you are able to convert the data into a good one-liner, you've got gold on your hands'.

- Political party member for the municipality of Leiden

Evidence needs a story around it, to be made into a strong one-liner or requires framing to be used to its fullest potential. Required for this transformation are political savvy and experience. One needs to be an expert at timing, topic selection and framing. An example of this is a report on welfare benefits and workforce reintegration. The municipality of The Hague yearly helps many unemployed people find a

job. These people then leave the welfare benefits system. A report was written by a scientific bureau on this topic with the research question being ‘how effective is this program?’ The report concluded that the municipality did not sanction and punish often. Sanctions are in order when a beneficiary does not show up for a scheduled mandatory monitoring meeting for instance. The report stipulates that more sanctions increase the number of people leaving the benefits system, and therefore this must be done more often. But as a politician one has to ask the question, is this really the way we want to treat our citizens? Punishing them while they are already having problems? Is optimal effectiveness really what one wants to achieve here? The politician must interpret the findings, and see if the conclusion of the report is actually useful in the real world. This is also an example of a science in the lead characteristic. When the numbers become leading and policy effectiveness is the only goal, compassion suffers.

The political translation of evidence has another very obvious quality. Without a message or story to go with the evidence, there is nothing to debate over or to vote for. Evidence alone often does not bring about political change or debate. Before evidence can be used in the political arena it needs to be made into something concrete. Otherwise, people will not see the urgency of a topic and it will not be thought-provoking.

Once translated, the evidence can then also function as a weapon. To be used to defend a policy or attack an opposing one. An example of this is Leiden Bio Science Park (BSP). The BSP is one of the biggest job creators in Leiden, and therefore receives large amounts of funding. A respondent explained that the BSP has been a topic for debate recently. Some political parties thought that too much money is going to the BSP, a place where highly educated professors work in expensive laboratories receiving large sums of money. Whilst there is no job creation for more practically educated people. The money should instead be invested in social welfare programs that benefit citizens directly. To oppose this viewpoint research was initiated. The municipal ‘Rekenkamer’ (accounting office) was asked to find out what the BSP meant for Leiden. What does it do for job creation and is it a profitable investment? The evidence from the research was clear, for every euro put into the BSP, two euros came back. A sound investment. And for job creation, jobs for all different education levels were generated by the BSP. This evidence could now be used as an ally in debate. Anytime a party would bring up the BSP as being something negative for the city, the evidence proved them wrong.

The last step in the policymaking process is decision-making. The interviewed politicians conclude that they are the ones deciding to take up evidence, pursue a certain policy or use a window of opportunity. Not other actors like scientists. An example from a political party staffer explains this well. He explains that the ‘hypotheekrenteaftrek’ or mortgage interest deduction policy in The Netherlands is disliked within the scientific community. This policy stipulates that a person can deduct the mortgage interest from their gross income. This decreases gross income which in turn means a decrease in taxable income. This policy helps homeowners while harming the Dutch housing market. It makes buying a house more

difficult. The European Union underlines this. The European Union drafts recommendations in the area of fiscal policy for each member state every year. They show that they also dislike this policy because of its toxic effects on the Dutch housing market. This opinion is echoed by other local scientists the interview revealed. Why then does the hypotheekrenteaftrek still exist? Simply put, it is politically impossible to stop. As the interviewee pointed out, many people live in a home they own, many people will oppose changing a policy that helps them own that home. Political parties know this too, in negotiations any proposed changes to this policy are met with a hard no. It is too politically unattractive to do so. In the end, politicians decide to not act on the evidence. Politicians see this as a characteristic of the political decision-making process. Sometimes it is better not to use a report because the findings are politically unattractive and therefore unusable. On some occasions, it is better to wait and bide your time.

There is a characteristic of the policymaking process politicians underlined that influences their entire policymaking process, time. It is in the back of their heads every step of the way. Politics is characterised by high dynamism. Problems appear and disappear quickly, and politicians need to be able to adapt to this fast-changing world. This short time horizon influences how evidence is used in policymaking practice.

'A politician wants to have a solution next week if a problem pops up today, scientists obviously need more time than that'

- *A politician in the Second Chamber*

Some aspects of the politics in the lead lens can be recognised here. Translation using political savvy and experience, evidence as an idea giver and the three main concepts indeed play a large role. Evidence gives credibility to a standpoint and makes it more resilient to political pressure is seen both in the theoretical framework and in the analysis of the real world. An aspect from the duet lens is visible too. While politicians see the merit of evidence use, they also see the need for political translation to get the best of both worlds. And to make sure that policy stays humane, like the workforce reintegration example. Evidence being used as a weapon returns here too. It can help defend or oppose a differing position. Also interesting is the fact that the opposite of the enlightenment model from chapter 2.5 is true in practice. Political translation is necessary to have something to debate over or vote for. Evidence alone does not bring about political change. Contradicting what the enlightenment model entails.

4.2.2 Scientists in the policymaking process

Before this chapter can go into scientists in the policymaking process it is important to answer a question that has not been answered, what is science according to this thesis? The work of Knorr-Cetina introduced the idea of epistemic communities, this helped solve the demarcation problem. Now the interviews will be used to illustrate what the field of public administration thinks science is. What the difference is with politics will become clear in chapter 4.3.2.

The interviewees describe science in this field as trying to explain trends and real-world phenomena. The goal is to advise and help the public administration system function better. Science is not normative or close to political practice but clearly separated and objective. Science defends the right to research and find anything even if it is unwelcome. Research is done by using precise concepts to study phenomena in the real world. One has to show the process behind this and back up any claim made. The eventual findings then ought to be shared with a wider audience. Firstly the public sector, but also the general public. There is a proactive role here for the scientists operating in the field of public administration. The goal of this field is the betterment of public administration, and sharing findings helps achieve this.

As mentioned earlier, the description of policymaking practice was constructed using the data from the interviews. In the first questions of the interviews, the interviewees described their day-to-day work, and those answers are presented here.

The scientists interviewed describe a large and multifaceted role of science in the policymaking process. They underline how their research can help politicians in a multitude of ways. One of those ways is helping with problem definition. Scientists can aid in finding variables and patterns and showcasing their impact. This makes tackling problems more manageable since they are now better understood. The scientists said that this is the ideal role of science in policymaking. Scientific evidence also helps in choosing the right policy instrument. Now that the problem is defined the discussion can begin on how to tackle it. It is important to note however that this is not a decision a scientist makes. They can help find the best strategies based on the numbers. But to actually act and tell which strategy to use is a political decision they stay away from. One can recognise the macro-level evidence-use role from Caplan (1979) here. A great example of this is the problem of ‘urban heat’, mentioned in one of the interviews. Densely populated cities tend to be a few degrees warmer than the countryside on the same day. This problem can be combatted by making cities greener. Trees and other greenery help cool down a city. By presenting politicians with the latest data on which neighbourhoods are affected the most, politicians can easily find out where trees and greenery can make the biggest difference. Here science explains the problem and how to tackle it.

Scientists also act as antennae and point politicians toward urgent topics. Especially at the research bureaus of political parties. They keep their ears to the ground and eyes open to find out what important topics are in society. They then share this information with their politicians, pointing them toward a subject or problem they ought to tackle. They can then together find out what the best strategy is to combat the issue.

‘You take them with you in your scientific way of work and show them the conversations in society. And in doing so you educate them in a way.’

- *Researcher at a research bureau of a political party*

After helping policy in the early formation stages, the role of scientists is not done. They also provide ex-post and ex-ante evaluations of policies. First looking at the ex-ante evaluations, an example was presented of using research to tackle doubt. If new policy plans are proposed, often not everyone is convinced right away that they will work. At the municipal level, party members can then ask the municipal council to initiate research on the topic. The findings can help decide if the new policy plans are sound. In this way, the scientific community helps the politician, by checking policy plans that one is not sure about yet.

Scientists can also help in an ex-post evaluation. A role introduced by Caplan (1979) in chapter 2.5. An example of this is the 'Nederlandse Bank' (NB). When the government introduces a new package of purchasing power policies the NB looks at them closely. The NB will make sure that the responsible people will hear what they have to say. They will not directly advise or tell the policymakers to stop, again that is a political decision. They offer words of caution; be careful with a large amount of government spending in times of inflation for example. But they will not directly interfere with the policymaking process. This evaluation role has a clear goal, an interviewed scientist says. In a time of growing attention to government spending, it is important to get value for money in policymaking. Science can help get this value. This was one of the original reasons for EBPM's popularisation. The underlying notion is that evidence-based policy is more effective and efficient.

It is important to include politicians in what one is doing too. The importance of this is underlined in more than one interview. By showcasing the work at a research bureau of a political party to politicians, a researcher can showcase why and how they are working on something. In this way, the politician better understands the scientific world and gets a grasp of what is important for the research bureau and society. There is an active role here for the scientists the interviewees explained. No scientist spends months researching something, for it then to go unnoticed. They would like to share their evidence with the world and change the world for the better. By making scientific reports readable and staying in close contact with politicians this can be achieved, helping the timing of evidence as well. There are also media appearances like television and radio, which help get scientific findings from the researcher's desk to the policymaking table. The scientists do stress however that radio and television appearances do not fit the character of their work well. These appearances ought to be quick and easy to understand. These are characteristics science is not often associated with. Research takes time, is nuanced and often difficult to grasp quickly.

Again some aspects of the science in the lead lens are recognised here. Scientific evidence ought to play an impactful role in policymaking. Knowledge can help policymakers understand problems and trends, and improve public administration. The betterment of public administration is one of the key goals of this scientific field, keeping policymakers to a higher standard as seen in the work of French (2019). The evidence must be gathered through the strict following of rules and protocols, which is central to

the science in the lead approach and science's philosophy. An important aspect of the duet lens is visible here as well. Scientists understand that it is important to actively share and time evidence to get it to be used. This is where the proactive role of scientists comes in. There is a need for a mix of rigorous testing and easily accessible knowledge. Evidence-based policy is also more effective according to the scientists, this naturally makes evidence use logical. One can recognise the knowledge-driven model here.

4.3 Philosophies in policy practice

The analysis has gone over the policymaking process through the eyes of the interviewees. It is now important to take a step back and go from practice to philosophy. This will help find the philosophical notions underlying the world of practice. This thesis aims to find out if the apparent philosophical conflict exists in the real world after all. In the policy practice description above, certain role conceptions have come forward. This part will go into the philosophies behind these role conceptions. Starting with the policymaking practice as described by politicians.

4.3.1 Philosophy of politics in policymaking practice

As more and more politicians were spoken with it became evident that using scientific evidence as a base for policy is important. There is a clear political philosophy behind this. As one can recall the philosophy behind politics is driven by wanting. It is about dealing with the three main concepts at the heart of politics. Namely power, conflict and a multiplicity of actors. Politicians basing their policy on scientific evidence comes from the idea that it helps them stay upright in political debate. As spoken about before, an evidence-based viewpoint is more resilient to political pressure and more difficult to oppose. So basing one's policy ideas on evidence helps to deal with power struggles, conflict and the multiplicity of actors. This fits well with the interpretation that evidence grants policy more credibility and substance as discussed in the 'politics in the lead' chapter. Evidence helps defend a policy idea from the opposition.

Translation plays a substantial role in policy practice too according to the politicians. Evidence in itself is handy in a debate, but when translated into a story or one-liner it becomes even more useful. A political philosophical notion lies behind this. The idea is to handle the characterising concepts of conflict, power and the multiplicity of actors. By political translation of scientific findings, politicians attempt to win a conflict, gain or stay in power and showcase against other actors why their policy viewpoint is best. This translation is done by using experience and political savvy. This fits with the work of Colander & Kuper (2014). They stated that the main role of evidence is providing ideas and visions for policymaking, but it then requires political touch to be made into something actionable. It fits well with points mentioned in the 'politics in the lead' chapter as well. Evidence according to that lens was used for symbolic or framing purposes. By interpreting data politicians can shape evidence to fit their narrative. This is the same philosophical notion behind the use of evidence as a weapon. The idea is to win a conflict, gain or

stay in power and combat a multiplicity of actors. By framing evidence, one can use it as a weapon against opposing viewpoints or help defend your own.

The last major step in policymaking according to the politicians is decision-making. Their decision-making is influenced mostly by the three concepts that characterise politics. Their decisions to use certain evidence but no other findings, to pursue a policy or not and vote for or against something are all affected by the three main concepts. If a decision prevents a conflict it will be made, The Hypotheekrenteaf trek case is an example. If a decision will secure power or put one in an advantageous position to get it, it will be made. If a decision goes with the majority in the multiplicity of actors, it will be made. The use of evidence in decision-making relies on the effect the decision has on the three main concepts.

The philosophy of politics being all about conflict, power and a multiplicity of actors influence a large part of the policymaking practice for politicians. They are concerned with dealing with these three challenges, and these challenges decide the strategy and decisions made. To deal with the three challenges translation, interpretation and framing are employed.

4.3.2 Philosophy of science in policymaking practice

One interviewee very eloquently explained what the philosophy is behind science in policymaking, she said;

'Ideally, science is a floodlight. It sheds light on the entire subject. All facets of a problem will be analysed and there has to be freedom to this, even if the following conclusions are unwelcome. This freedom has to be protected.'

- A professor at Leiden University

Science will look at a problem in its entirety and will weigh every facet of it to meaningfully conclude something. One can recognise the philosophy of science here as introduced in the theoretical framework. Science will strictly follow a path of scientific inquiry, which adheres to rules and protocols, to produce evidence. The freedom to do this has to be protected, scientists have to be able to look at a problem unencumbered by bias or politics. This will only increase the quality of evidence.

This notion returns in practice. As scientists stated, a role for them and their evidence in the policymaking process is helping define a problem, explain trends and point toward the best approach for solving an issue. This evidence must be gathered whilst adhering to the strict rules that dictate scientific inquiry. They have to be able to work independently from politicians. A researcher at the research bureau of a political party underlined this. They do not receive assignments from their political party to research a certain topic. If research is underway, they are not checked or advised by their political party. They independently decide what they are going to research. There is no room for political interference of any kind, for this jeopardises scientific independence. This was also mentioned in an

interview with a professor at Leiden University. One cannot be both scientifically active and politically active at the same time. A political view will interfere with sound scientific inquiry. When a university is invited by for instance a ministry to research a certain topic, ground rules must be established. There cannot be interference. Science must have the freedom to find whatever it may find, even if the findings are unwelcome.

Evidence-based policies are more effective, therefore the use of evidence has increased in a time of tight government budgets. This was one of the reasons why evidence-based policymaking increased in popularity according to an interviewed scientist. Behind this notion is that evidence use in policymaking is the right thing to do, for it makes policy better. This was also introduced in the theoretical framework. Public institutions ought to understand that this is the best way to make policy. Evidence makes policy better, which naturally makes it inclined to be used. This viewpoint resembles the intellectual model from chapter 2.5. Using evidence in policymaking is something a virtuous society does.

What can be concluded is that science plays a varied role in policymaking. From acting as a foundation to helping with evaluation. They also aid by pointing out urgent topics or explaining real-world trends and phenomena. What is behind all these different uses is the heart of the philosophy of science, namely gathering evidence through rigorous testing and observation using a systematic approach. With the goal in mind of improving public administration. This system cannot be interfered with, steered or guided.

4.4 Philosophy in conflict?

Having studied the philosophies behind the policymaking practice, it is time to discuss a possible conflict between these philosophies.

The philosophy of politics in policy practice is about dealing with the three concepts which characterise it. Conflict, power and a multiplicity of actors. Their policymaking practice is influenced by these three concepts, they form and alter the way politicians operate. This calls for flexibility, quick thinking and strategic behaviour. This can be seen in the practice described above, using evidence as a foundation for credibility, translating evidence and making final decisions. Using evidence as a foundation is not mainly for defining problems, but that does play a role. Politicians like to base policy on evidence because it helps them tackle the three concepts. Evidence defends a policy against the opposition, makes a viewpoint stronger in conflict and evidence-based policy is more resilient than mere ideology-based policy. As stated earlier, not many politicians would be comfortable with basing a policy on ideology alone. Evidence helps a policy 'survive' the high dynamism and conflict of politics, and that is why using evidence as a foundation is popular. The same idea is behind the political translation of evidence. Politicians do this to better handle the three concepts. Translation offers ammunition to attack an opposing viewpoint and helps defend your own. Creating a story of frame around evidence becomes more useful in tackling the three concepts central to political philosophy. This is also true for decision-making. Every decision is characterised by dealing with the three concepts. They dictate which choice

is made and why. If a report is not timed well, this might influence if it is used or not. If it does not help in a current conflict or debate, maybe it will lie unused until the time is right.

The opposite is true in science. In politics dealing with the three concepts is central. This demands dynamism, flexibility and strategic decision-making. Science however cannot be influenced by conflict or power struggles. It does not alter its process because there is debate or a multiplicity of views. It will follow the rules and protocols it has to. The process of scientific inquiry will look at the entire picture and reveal all that is found. It is not concerned with timing or conflict. The research will show what the problem is and the best ways to deal with it, but it will not dictate which way to go or to choose at all. That is a political question. The floodlight explanation by the Leiden University professors continues. She says that political philosophy, in contrast to science, is a flashlight on a subject instead of a floodlight. It specifically looks at certain points in the subject, not the entire picture. Making a political view of the world the dominant one is political strategy, it is not looking at the entire subject and weighing all factors equally.

I do think we have different goals. If you're a researcher, you're interested in finding out a why, how you can explain something or how you can understand something or collect data to map a phenomenon or something like that. For them (politicians) knowledge use is much more, I have this problem, how do I deal with it? Then they look for the knowledge they need or enough knowledge to be able to address it somehow.

- Professor at Leiden University

To summarise, in policymaking practice the two philosophies behind politics and science conflict with each other. The philosophy of politics is to handle the three concepts, which means to strategically operate in an arena of conflicts. The philosophy of science is to shine a light on the entirety of a subject and exhaustively research a topic, to explain a real-world phenomenon. Here, there is no place for strategy, framing or influences from outside. Politics is about strategy. When to use what on whom. Science is about what is, and why. When to use what on whom is not its concern, as a professor at Leiden University concluded, that is a political question.

4.5 Back to practice

It is interesting to analyse what the consequences are of this philosophical conflict for policymaking practice. From the interviews, it seems that the philosophical conflict in practice does not entail a practical conflict. It does help explain certain frustrations mentioned in the interviews, however.

Many of the conflicts in philosophy are solved pragmatically in practice and respondents characterise the interaction between science and politics as not difficult. Scientific evidence can find its way into politics, and politicians actively look for evidence to study and use. The cause of this, according to one interviewee, is that both scientists and politicians are curious. A shared characteristic. Scientists are

looking for explanations and answers, politicians are curious about how things will turn out when evidence is used in the real world. This curiosity connects them. Scientists are not afraid to reach out to politicians or the media to talk about their latest findings and how they can be helpful. It is a common misconception that scientists create evidence and then see no need for further action, with the evidence having the proverbial desk drawer as a destination. As introduced in chapter 4.2.2 scientists see a proactive role for themselves here. Include politicians in what you are doing, and share your findings with the world. The interaction is simplified by the fact that the largest role of science in politics is that evidence gives a foundation for policymaking. The fact that scientific evidence can be a supplier of ideas and a giver of foundation makes politicians eager recipients of it.

Frustrations do exist in the interaction however. And these can be explained by the philosophical conflict that does exist in practice. A common frustration is the difference in time paths. Politicians often need answers quickly, whilst solid scientific methods cannot be rushed. This contrast is also visible in the philosophical conflict, where politics deals with dynamism and science has to meticulously follow methods. Another frustration was the three concepts central to politics. The interaction between science and politics is often influenced by this. Non-take-up of evidence because of bad political timing for example is mentioned as being frustrating. The translation of findings to tackle conflict and a multiplicity of actors was also named as being a frustrating element for scientists. This is visible in the philosophical conflict as well, how the three concepts influence evidence use and require strategic behaviour. Something science is in conflict with. The interviewees concluded that these frustrations are not enough however to cause a practical conflict. Both are clear in their intentions and understand each other's worlds, possibilities and limitations.

'I actually believe that politics and science go well together, as long as you are clear about where you stand and from what perspective you are looking.'

- *Researcher at a research bureau of a political party*

Chapter 5

5.1 Conclusion

This thesis set out to answer the question *"Does, and if so how, a conflict of philosophies exist in the world of policy practice?"* By conducting interviews and analysing the findings it can be concluded that there is a conflict of philosophies in the world of policy practice.

The philosophy of politics in policy practice is about using strategy, framing, translation and interpretation to handle the three challenges of the political world. The philosophy is to use evidence to deal with conflict, vie for power and tackle the multiplicity of actors. To deal with the dynamism that characterises politics. The philosophy of science in policy practice is about using precise concepts and transparent methods to explain trends and real-world phenomena and improve public administration.

These methods have to follow the rules and protocols of the scientific field of public administration and there is no room for normativity, outside influences or translation. There is only room for explaining how and why. What should be done in what way is a political decision. Something, according to the scientists interviewed, a scientist should stay away from. These philosophies are incompatible with each other. Dynamism and framing do not mix well with strict methods and rule-following.

The policy practice as described in the analysis has some similarities with the practice described in the theoretical framework. Ideas from science in the lead, politics in the lead and the duet lenses are visible. The underlying ideas behind the science and politics in the lead lenses are the driving force behind the philosophical conflict, which makes sense since those ideas are based on the philosophies of science and politics. In practice, one can recognise the duet lens the most. The two worlds 'challenge' each other to create the best possible policy, both worlds adapt to each other while also keeping their characteristics

In practice, the philosophical conflict does not affect the interaction between science and politics in policymaking. The interviewees describe the interaction as not too difficult, with some frustrations and obstacles. These frustrations and obstacles are explained by the philosophical conflict, underlying how the philosophical conflict does exist in practice.

It has become evident that the world of policy practice is heavily influenced by science. It plays a myriad of roles and is something many politicians cannot go without according to the interviews. It gives ideas, grants foundations for policies and enhances effectiveness and efficiency.

5.2 Discussion

This thesis has found a philosophical conflict between science and politics in policy practice. Dynamism and interpretation are incompatible with strict methods and careful weighing. Previous studies on this topic have not gone in-depth on if an apparent philosophical conflict exists in the real world. Articles did go into practical conflict, but not a philosophical one. Even though much has been said about what the consequences are or could be. This thesis strives to fill this gap in the literature, highlighting the significance of this research.

During the data collection phase, this thesis set out to interview a wide spectrum of both politicians and scientists. This was a success for the scientific world. Both political party research bureaus and university professors were interviewed, which was the goal. Interviewing the politicians was a partial success however. Both municipal level and national level politicians and policymakers were interviewed, only not on as wide of a spectrum as beforehand planned. It was difficult to get in contact with some political parties. This can affect the outcomes of the interviews since these people might have had different viewpoints. While originally thought that this topic would be rather politically sensitive and therefore respondents would be hesitant to speak their minds, this was not the case. The interviewees were very open, both about their day-to-day work and their opinions on this topic. This made the data rich and useable and allowed for an in-depth analysis.

5.3 Recommendations

For future research, it is important to monitor the interaction between science and politics. As interviewees recommend the relationship must be maintained to keep getting the best of both worlds. In a time of a changing political landscape and a changing role of science, it is paramount to keep making sure the relationship does not get worse. In a few years, it is a good idea to venture out into the field once again to take stock of the situation. It is also relevant to conduct this research again, and then try to speak to more political parties, to solve the problem discussed above.

This thesis also recommends taking time in the interviews to better define the central concepts. This was done in the interviews for this thesis, but perhaps it is better to beforehand state the interview will be long. This enables a ten-minute conversation on what science and politics are precisely. This will provide better data to use in describing the day-to-day practice of the interviewees, while also presenting data on the possible philosophical conflict.

Appendix I

Interview guide politicians

Introduction

1. Who am I?
2. Questions about anonymity and data processing
3. What am I researching?
4. What are the concepts I will be using in the interviews?

Introductory questions

5. What kind of work do you do?
6. What does your day-to-day look like?

Main questions

7. How important is science in your day-to-day work?
8. Can you name any examples of when it was important, and when it was not?
9. Why was it important, or why not? What influences this?
10. What is the ideal role of science in policymaking?
11. An NSOB article writes about a philosophical conflict between the worlds of science and politics, what do you think about this?

Finishing up

12. Do you have any questions for me? About data collection and use or any other?
13. Do you have any tips on who to interview next?

Thank you for your time!

Interview guide scientists

Introduction

1. Who am I?
2. Questions about anonymity and data processing
3. What am I researching?
4. What are the concepts I will be using in the interviews?

Introductory questions

5. What kind of work do you do?
6. What does your day-to-day look like?

Main questions

7. What is the role science plays in policymaking, if it should play a role at all?
8. Can you explain this role? What does it look like and how important is it? And are there any examples?
9. Why was it important, or why not? What influences this?
10. What is the ideal role of science in policymaking?
11. An NSOB article writes about a philosophical conflict between the worlds of science and politics, what do you think about this?

Finishing up

12. Do you have any questions for me? About data collection and use or any other?
13. Do you have any tips on who to interview next?

Thank you for your time!

Appendix II

Documentation of codes

Code name	POLPHI TRANSLATOR
Meaning	Political philosophy is to tackle the three concepts. Here via translation/interpretation
Exemplar/Most clear or compelling example of this code	Welfare benefits and workforce reintegration in The Hague
Other instances	Free school lunches Urban heat Welfare benefits story
Relationship to other codes (if any)	

Code name	POLPHI WEAPON
Meaning	Political philosophy is to tackle the three concepts. Here via the use of evidence as a weapon
Exemplar/Most clear or compelling example of this code	Leiden Bio Science Park
Other instances	Free school lunches Dutch housing market rapport Welfare benefit reduction story
Relationship to other codes (if any)	POLPHI TRANSLATOR

Code name	POLPHI FOUNDATION
Meaning	Political philosophy is to tackle the three concepts. Here via basing policy on evidence
Exemplar/Most clear or compelling example of this code	CPB numbers
Other instances	Dutch housing market rapport
Relationship to other codes (if any)	POLPHI WEAPON

Code name	POLPHI DECISIONMAKER
Meaning	Political philosophy is to tackle the three concepts. Here via translation/interpretation
Exemplar/Most clear or compelling example of this code	Hypotheekrenteaftrek
Other instances	Dutch housing market rapport
Relationship to other codes (if any)	

Code name	SCIPHI IDEALS OF SCIENCE
Meaning	Science philosophy, shown here by the ideals of science like rigorous testing, rule-following, etc.
Exemplar/Most clear or compelling example of this code	Floodlight example
Other instances	Not both politically active and scientifically active No influence from outside
Relationship to other codes (if any)	

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