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# Framing the Problem: Knowledge Brokers in the Multiple Streams Framework

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## **Abstract**

A lot of attention has been focused on the policy stream of the multiple streams framework (MSF). John Kingdon used the role of the policy entrepreneur to theorize what was going on when problems become political issues. In order to fully grasp this process we need to further theorize also the problem stream. What is going on in the problem stream is defining the conditions for coupling done by policy entrepreneurs. It creates the context for coupling. Framing of a condition as a problem make us think about the problem in a particular way, which enables coupling to certain policies, but not to others. By including the knowledge broker as an actor in the problem stream, we can study the process of framing conditions as political problems and thereby the context of coupling. How political problems are viewed in different countries could possibly depend on differences in problem framing, rather than regarding policy entrepreneurs. The constant framing and reframing by knowledge brokers makes it important to study who gets to talk and who is listened to. Time, access, and credibility are crucial for the success of a knowledge broker. A further benefit of including the knowledge broker in the MSF is that we can theorize why actors move or do not move between streams. Kingdon argued that this movement was possible, but rather limited. The presence of institutional constraints is suggested as important for understanding this. My arguments are illustrated by a case study of climate change policy-making in the Swedish and international context.

## **Introduction**

In the Multiple Streams Framework (MSF), as outlined by John Kingdon (2003), the policy entrepreneur is the actor that makes things happen. By suggesting policy alternatives and connecting them to problems at certain points in time, policy entrepreneurs have a major role in determining what issues end up on the political agenda. In coupling problem and policy alternative policy entrepreneurs frame their solutions to fit a certain problem. However, also problems are framed by someone. Thereby they lend themselves to certain solutions. The possibilities for coupling problems and policy alternatives are determined already in the problem stream. This implies that

what is happening in the problem stream ought to be as important for our understanding of which issues receive political priority as what goes on in the policy stream. The framing of an issue as a political problem makes certain policy alternatives seem plausible and makes other alternatives unthinkable. Thereby, problem framing defines the preconditions for coupling the streams and sets the stage on which policy entrepreneurs act.

Kingdon does pay attention to the role of problem definition (2003, 109—113) and how it implies that “some whole classes of approaches come into favor and others fall from grace” (2003, 115). According to Kingdon, policy entrepreneurs not only push for certain policy alternatives and couple these with problems, they also play an important role in pushing certain problem definitions (2003, 115, 204). If we want to analytically separate the problem and policy streams we have to develop a more elaborate account of what is happening in the problem stream. To assign agency in both the problem and policy stream to policy entrepreneurs risks blurring the lines between streams and what goes on within them. In this paper, I expand on Kingdon’s account of the problem stream and tries to more clearly separate it from the policy stream. I do this by using insights and concepts from agenda setting and IR theory. I will use the concepts of framing and knowledge broker to develop agency in the problem stream.

The approach suggested here is to understand the process in which issues become advocated as political problems through framing. Thus, we need to focus on the actors that perform this framing. I argue that they play the role of the knowledge broker. The concepts of framing and knowledge broker will be elaborated further below. Further, it will be argued that time and access to policy-makers are important determinants for successful framing of issues as political problems. Finally, I will also argue that the reason why actors tend not to move between streams is due to institutional constraints. Depending on the problem studied and what actors are active, the institutional constraints can be stronger or weaker. The argument is based on a case study of the Swedish and international climate change policy process from 1975 to 2007 (Knaggård 2009, 2014a).<sup>1</sup> Examples from the case study, including both the Swedish and international contexts, will be used to illustrate my argument.

I will first argue for the inclusion of framing and knowledge brokers into the MSF. Thereafter I will discuss what factors determine successful problem framing, including access to the political system,

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<sup>1</sup> The study is based on a wealth of material. It includes interviews with a broad range of politicians, political appointees, civil servants and scientists; a broad range of official political documents, like committee work, government propositions, parliamentary debates and decisions; newspaper material (mostly debate articles); and reports from a broader scientific community addressed at policy-makers. The study has been presented in more depth in Swedish (Knaggård 2009).

credibility of the knowledge broker, and their willingness to spend time in that role, and finally the characteristics of the problem frame. The final section of the paper discusses the possibility of actors to move between streams.

### **The process of problem framing**

One problem with Kingdon's account of the problem stream is the lack of agency. In some sense problems seem to just appear out of indicators, focusing events, and feedback from already enacted policies. According to Kingdon (2003, 90), indicators are numbers that are routinely measured and can signal that something needs to be done. Focusing events can be accidents or a crisis of some sort that illustrates the problem (2003, 94f). Finally, feedback is assessments of adopted policies and running programs (2003, 100). He does point out that data needs to be interpreted (2003, 94), and that a person's values are important for this, as is different forms of comparisons and categorizations (2003, 110). It seems clear that this has to render agency to the problem stream. Kingdon here highlights the role of the policy entrepreneur. However, he does not go further in discussing how problems become defined, neither how it affects the coupling of streams. The point of departure for this paper is that *someone* has to interpret that data and define a problem. By framing an issue, certain aspects of it are highlighted and others are toned down. The concept of framing thereby points out that there are several ways in which an issue can be understood. According to Schön and Rein (1994, 30) "[t]here is no way of perceiving and making sense of social reality except through a frame, for the very task of making sense of complex, information-rich situations requires an operation of selectivity and organization, which is what 'framing' means". Which problem frame will catch on determines how the issue will be perceived, what actors will be attracted to it, and what solutions will seem relevant. This is because frames are based on "specific models of agency, causality, and responsibility" (Jasanoff & Wynne 1998, 5). Frames tell us what the problem is about, why it occurred, who is to blame, and what can be done about it. In this sense, the concept of framing fits nicely with Kingdon's framework and his definition of a problem (2003, 109): "Conditions become defined as problems when we come to believe that we should do something about them".

Indicators, focusing events and feedback reveal conditions that without framing are meaningless. They can, however, all be used in framing a condition as a political problem. Framing entails telling a story (cf. Stone 2002) about how a problem should be understood and what can be done about it. In the climate case important indicators are, for example, the increase of carbon dioxide emissions,

and the development of global temperature. Focusing events are storms and floods. Feedback can consist of decreasing emissions from transport and the heating of houses. However, these do not mean anything without a frame or a story that can tell us what the problem is about. For example, climate change is framed as caused by human emissions of greenhouse gases and as a threat to societies. This frame draws on a number of different indicators as well as symbols, like the hurricane Katrina that hit the US in 2005. Climate change can be managed politically according to this frame. The possible political response is to decrease the human emissions that create the problem.

Framing is a highly political activity as it affects how issues are perceived. With Kingdon's words (2003, 110), "[t]here are great political stakes in problem definition". It can be strategically used to gain support for an issue or for a solution (cf. Stone 1989, 133; Schattschneider 1960). As a frame not only entails an understanding of the problem, but implicitly or explicitly also a possible course of action, the difference between framing in the problem and policy streams is not self-evident. This is pronounced by the fact that Kingdon as well as other scholars have seen policy entrepreneurs and policy-makers as managing problem definition. For example, Zahariadis (2007, 70) argue that "[p]olicy makers and entrepreneurs use labels and symbols that have specific cognitive referents and emotional impact... Employing these elements strategically alters the dynamics of choice by highlighting one dimension of the problem over others". I argue that we have to make a more clear-cut distinction between the two streams. Seeing policy entrepreneurs and policy-makers as the main problem framers blurs the analytical distinction between streams and thereby undervalues what is going on in the problem stream. Framing in the problem stream is about portraying a condition as a political problem. This entails an idea about some sort of action to counter the problem, but does not specify alternatives. In the climate case the problem frame included that emissions should be decreased but nothing more specific on how it should be done. The difference between the problem and policy streams is thus that in the latter policy entrepreneurs develop specific policy alternatives and couple these to certain problem frames, whereas in the former problem frames only include a general understanding of that something needs to be done. The analytically important distinction between knowledge broker and policy entrepreneur makes it possible to theoretically develop the problem stream.

### **Confusing actors and roles**

My argument to include the role of knowledge broker in the problem stream is not only based on the need to analytically separate the streams, but also on the unfortunate confusion between actors and roles that we can find both in Kingdon and in work that criticize him.

In his book Kingdon (2003) explores, as I would see it, two different and not entirely consistent ways of studying the policy process. In the first part of his work, he focuses on actors and what role they play in agenda setting. For example, he makes statements about what actors are important in the different streams (2003, 68f). Actors in the policy stream are often not so visible, for example career bureaucrats and academics. More visible actors, like the president, parts of Congress and media, are more active in the problem stream. This part of the book is used to explore the dynamics involved, which is which is theorized in the second part of the book. Here Kingdon shifts focus from actors to process with the separation of the problem, policy and political stream. He also introduces the role of the policy entrepreneur, who plays a crucial part in placing issues on the political agenda. I argue that the preoccupation with actors as discussed in the first part of his work has some negative effects. It unnecessarily narrows the applicability of the framework, as it is adjusted to American circumstances. It might also run into problems explaining the development in certain policy areas. Robinson and Eller (2010) have shown that in school politics the actors in the problem and policy streams were the same, and further not the ones anticipated by Kingdon. On these grounds they criticize the MSF for assuming independent streams.

I find this critique misguided as Kingdon never claimed that there was an absolute independence. Rather the separation of streams should be seen as analytical. However, Kingdon's focus on actors does invite critique of this kind. The unfortunate aspect of it is that there is no need for the preoccupation with actors, as there exists the alternative of roles in the framework. I would argue that the strength of the MSF is exactly the rather limited importance of what actors are, in terms of the position they hold, and the significance of what they do. With this approach we can go beyond simply looking at which actors are active and instead study what role they play in agenda setting. The policy entrepreneur is crucial in this respect. Differences in how problems are understood and positioned on the agenda in different countries can be studied as a matter of framing rather than as foremost a question of the timing by policy entrepreneurs. The problem, as I have already presented, is that a lot of work on the MSF, including Kingdon, conflates what the policy entrepreneur does in the policy stream with what is going on in the problem stream. The person acting as policy entrepreneur can of course be active in both streams, but what he or she does in the two streams has to be analytically separated. Therefore, I introduce the role of the knowledge broker.

What actors will play the role of knowledge broker and policy entrepreneur will of course vary between policy areas and countries. In school politics, teachers and parents will play both roles, as Robinson and Eller (2010) have shown. In climate politics, scientists are crucial in the role as

knowledge brokers (Knaggård 2009, 2014a), contrary to Kingdon's argument that scientists will be important foremost in the policy stream. By focusing on roles, the MSF is strengthened as a framework that can travel over issues and countries.

### **The role of knowledge broker**

The concept of knowledge broker was presented by Karin Litfin, in a study of international ozone politics. She sees knowledge brokers as "...intermediaries between the original researchers, or the producers of knowledge, and the policy-makers who consume that knowledge" (1994, 4). What knowledge brokers do is to frame some sort of knowledge, be it research or indicators, to make it understandable in the political world. According to Litfin (1995, 253, footnote 14) "... what is fundamentally important is not their identities, but rather their ability to translate and interpret knowledge in accordance with new or pre-existing sets of linguistic practices which entail specific constructions of the world". They interpret knowledge and frame it to be understandable in a political context. This does not mean that these actors do not hold beliefs about the right political course of action or that their frames do not include value judgments—they do. However, for different reasons they refrain from stating it outright. Here lies the difference between knowledge broker and policy entrepreneur. In the case study of climate change politics it was quite obvious that some actors tried to frame climate change as a political problem, but deliberately refrained from coupling the problem to policy alternatives. This will of course be more pronounced in some policy areas.

In Litfin's account of knowledge brokers, the knowledge that actors use to frame problems is scientific in character. However, this has not necessarily to be the case. In order to frame conditions as problems we have to have some form of knowledge about them. It could be scientific knowledge, as is often the case in environmental issues. It could be bureaucratic knowledge about indicators or feedback from enacted policies. It can also be what is often called local knowledge (e.g. Jasanoff & Martello 2004), which is based on personal experience. Even if scientific or expert knowledge is often regarded as more important for policymaking, visible for example in the call for evidence-based decision-making, research has shown that local knowledge can be just as important for understanding problems (e.g. Wynne 1992). Knowledge, perceived broadly, opens up the role of the knowledge broker to a whole range of actors. What actors are successful as knowledge brokers is open to empirical examination. Crucial for the perspective taken here is that the quality of

knowledge is not the only, or even the most important, determinant of successful framing of problems.<sup>2</sup>

### **What determines successful problem framing?**

The argument in this section is based on results from the case study on the Swedish and the international climate change policy process (Knaggård 2009, 2014a). As climate change politics is highly dependent on scientific knowledge, scientists came forth as important knowledge brokers, and in some cases as policy entrepreneurs. What the study shows is that access to policy-makers and persistence are crucial for successful problem framing. These two qualities are comparable with the ones that determine success for policy entrepreneurs—time and access. A third factor that can be added is the credibility of knowledge brokers. Finally also the characteristics of the problem frame and how it is connected to the national mood will be discussed.

Successful problem framing cannot be equated with placing a problem on the agenda. Rather, when people in the political system come to accept a certain frame as given, problem framing was successful. This of course becomes obvious once the problem is placed on the agenda. However, a knowledge broker does not need to sell a problem frame at high political levels, but can just as well present a problem frame to lower civil servants. They in turn can act as knowledge brokers and pass the frame on and so it can take root in an organization. Kingdon (2003, 32) talks about this as elevating the problem. Problem framing is an on-going process of framing and reframing, where competing frames offer different understandings of the world. Policy entrepreneurs and policy-makers can choose the one among these frames that best fit their purposes. However, as already argued, existing problem frames not only offer opportunities to policy entrepreneurs and policy-makers, but restrict them in important ways.

#### *Access to the political system*

The studied case shows clearly the importance of a connection of the knowledge broker to the political system for successful problem framing. Throughout the studied period, 1975–2007, knowledge brokers with access to the political system managed to popularize their problem frames. A few policy-makers acted as knowledge brokers, with major impact. The Swedish professor of meteorology, Bert Bolin, with strong connections to the Social Democratic government, was also highly influential. Finally, the Intergovernmental Panel on Climate Change (IPCC), consisting of

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<sup>2</sup> In Knaggård (2014b) this perspective is further elaborated through a discussion of knowledge-based and emotional claims in framing.



scientists but with institutionalized communication with national governments, had an enormous impact on how climate change was perceived as a political problem.

That access to policy-makers is crucial should be expected. Kingdon sees this as a critical aspect for the success of policy entrepreneurs as well as for scientists. He argues that scientists that pursue an “inner-outer career”, that is a career both in academia and in the political system, will have the advantage of connections in both worlds (2003, 56). This is also a strong argument in Peter Haas’ (1989, 388f) work on epistemic communities, which are international groups of experts that share both scientific and political opinions. The success of epistemic communities to spread knowledge and frame conditions as political problems, he argues, depends on their contacts with national governments. Several of the scientists that he studied later became civil servants in different countries, and could thus advocate their problem frame from within.

Arenas where knowledge brokers and policy-makers can meet seem crucial. In the Swedish context a number of committees, of which some were expert-based and others parliamentary, functioned as institutionalized arenas for this exchange. The committee work evidently spread knowledge of the issue and established a certain problem frame in wider circles. At an early stage, it was only scientists who acted as knowledge brokers, foremost Bert Bolin. The committees came to function as a place where these scientists could communicate with other experts, civil servants, and even politicians. The dialogue between knowledge brokers and policy-makers seems to have been crucial for the spread of a certain problem frame and for the increasing importance of climate change as a political problem.

The IPCC also functions as such an arena. The major work of the IPCC is scientific—a number of scientists, divided into several working groups, assess the current scientific knowledge on climate change. However, for all the major IPCC reports so called *Summaries for Policymakers* are created. These are negotiated between the scientists involved in the IPCC work and national political representatives. These national representatives in many instances are civil servants, as is the case with Sweden, but are in some cases diplomats involved in negotiating the UN climate regime. In this way, the construction of the IPCC has established an arena for communication between the IPCC as knowledge broker and policy-makers around the world. This can explain the massive penetration of the problem frame advocated by the IPCC. If we want to understand the difference in impact that the IPCC has had in different countries, one important aspect to look at is how the connections between knowledge brokers and policy-makers are institutionalized in specific countries.

*Credibility of knowledge brokers*

A second aspect that is important for successful problem framing is the credibility of the knowledge broker. The credibility of knowledge brokers to a high degree determines what power they hold. To be seen as a credible actor in a policy area gives that actor a legitimate voice. Credibility can be based on knowledge, but also on other resources like normative appeal.

The IPCC problem frame was criticized after its first report in 1990. Alternative framings were advocated and took hold in some countries. In the US the debate around different framings came earlier and has been much stronger than in many other countries (Grundmann 2008). Also in Europe there are clear differences in how much attention the alternative frames attracted. In Germany, the Netherlands and Belgium they received some attention, whereas in France and Great Britain they had no impact at all (Skolnikoff 1997, 4f). In Sweden, knowledge brokers came forth with alternative frames in the beginning of the 1990s. They tried to frame climate change as something natural on which human influence was minor. According to Swedish politicians and civil servants involved in climate politics at the time, these alternative frames had no impact whatsoever on the understanding of climate change as a political problem.

The influence of the knowledge brokers with alternative frames was thus in most countries rather limited. This can of course be explained by a lack of access to policy-makers—many of them simply did not have someone to speak to. However, their credibility as knowledge brokers is also important. Whereas Bert Bolin was an active researcher in meteorology, which was seen as the most important discipline for understanding climate change, many of the other knowledge brokers were scientists from other disciplines, which were seen as more peripheral. Further, Bolin also had a high scientific reputation, which the others could not match. To accept the problem frame presented by a knowledge broker with high reputation—if scientist, interest group, or policy-maker— can lend legitimacy to political decisions (cf. Boswell 2009). Therefore, it can be a strategic decision for policy-makers who to listen to.

Knowledge brokers on the inside of the political system can also have different levels of credibility. Some of the civil servants working in national agencies had higher credibility as they came from a career within academia. When climate change was first framed as a political issue the civil servants with an inner-outer career could more easily perceive climate change as a political problem and of course had more credibility in spreading that problem frame than their colleagues with no such double career. The difference between the credibility of Bert Bolin and that of these civil servants was that Bolin had an ongoing academic career, whereas the civil servants had left academia and therefore were not updated on the latest research and only had limited contacts with the scientific world. How common it is that civil servants go back and forth between academia and the political

system could influence both the impact of problem frames, and the credibility of civil servants as knowledge brokers. This is likely to be particularly pronounced in scientifically grounded issues. This line of thinking can be translated to fit other groups acting as knowledge brokers, although the base of credibility might differ.

Credibility could also be connected to what Robert Dahl (1991, 40) calls rational persuasion—to convince someone of the correctness of one’s view with rational arguments. Also Litfin (1995, 254) argues that the influence of knowledge brokers is partly determined by the “plausibility of their interpretation”. This implies that policy-makers might accept a certain problem frame for other than strategic reasons. If a policy-maker becomes convinced of the rightness of a certain problem frame it will be more persistent and difficult to challenge. There is evidence that this was the case in Sweden. At the time when the alternative framings were made, Swedish policy-makers were unwilling to take action on climate change. In the international context, as well as in other countries, these problem frames were used to legitimize not acting. In Sweden, though, the alternative frames were never alluded to, even if it could have been used to avoid action. This indicates that Bert Bolin, among other knowledge brokers, had been able to convince Swedish policy-makers, irrespective of their political opinion, that climate change was caused by humans and serious enough to warrant political attention.

#### *A willingness to act as knowledge broker*

It is evident that access to policy-makers and credibility alone cannot explain why some problem frames take hold. It seems crucial that actors actually chose to act as knowledge brokers. It takes a lot of time to establish one’s problem frame among policy-makers. As knowledge broker you have to maintain a contact network and, just as policy entrepreneurs, be persistent in presenting your frame. Some actors, like lobbyists and interest organizations, are devoted foremost to this task. For other actors, like scientists, advocating a problem frame is not a main task. In the international as well as Swedish context, many scientists were unwilling to act as knowledge brokers. They were anxious that an involvement in what they perceived as political issues would have a negative impact on their scientific credibility. When scientists act as knowledge brokers it is very common that they become criticized by their peers for going beyond what science can claim. This is visible also in the later climate debate and the criticism against the IPCC.

In the Swedish context, Bert Bolin chose actively to act as knowledge broker. That he was first in doing so, gave him a first-mover advantage. When other knowledge brokers presented alternative

frames he had already secured the ear of important policy-makers and his problem frame had been established as the way to understand the issue.

### *The problem frame*

So far I have discussed the knowledge broker as such; I will now turn to the problem frame and what characteristics can explain successful problem framing. I will use Rochefort and Cobb's (1994) account of the aspects of a problem definition that generates political attention. They list causality, severity, incidence, novelty, proximity, and crisis. *Causality* is about who to blame. Here we find a connection to framing as the allocation of responsibility as discussed above. If the problem is caused by humans it is more likely that it will be seen as a political problem than if it has natural causes. This is visible in the struggle between knowledge brokers supporting the IPCC frame and those opposing it. Many of the ones opposing it framed climate change as a foremost natural process that humans had very little impact on, whereas the IPCC framed climate change as to a large extent caused by humans. The effort to reframe the issue therefore questions that the problem is actually political.

The more *severe* an issue is perceived to be, the more likely it will get attention. In the 1970s and early 1980s climate scientists only focused on the effects of carbon dioxide on climate change. In 1985, the scientific debate shifted to include other gases as well, collectively called greenhouse gases (Agrawala 1999, 160; Hecht & Tierpak 1995, 380). This implied a change also in the framing of the problem. The new frame emphasized human impact on climate change and described it as larger than previously thought. It also meant that climate change could not be seen as solely an energy and transport problem that partly had been addressed in the wake of the energy crisis in the 1970s. Bert Bolin (1994b, 26) later wrote in an article that “[s]uddenly, the climate change issue became much more urgent”.

*Incidence* is about the frequency and prevalence of the problem. If it is a common problem it will get more attention. For a long time this was an issue for knowledge brokers that tried to frame climate change as a political problem. Climate change was understood as something that would hit people in the South, foremost in the future. This made it less interesting for policy-makers in the North. This has come to change in the last ten years with, for example, the perception that flooding is increasing in central Europe.

Rochefort and Cobb argue that the *novelty* of an issue can work to attract political attention. They also argue that the novelty might be problematic in the sense that there are no prior examples that policy-makers could draw on. This initially could make it harder to couple problems and policies, and thereby to place a problem on the political agenda. Climate change was a truly novel issue, when it

was placed on the political agenda in 1988. Nothing in the studied case indicates that this was an advantage in terms of agenda-setting. Rather, there were problems in framing the issue in a way that policy-makers would understand. An additional problem was that the knowledge on climate change was purely theoretical at that point and that scientists highlighted the possibility of surprises—effects that they simply did not know or could calculate with any reliability. This made it hard to determine the severity of the problem. With older issues this is less of a problem as there will be statistics to support problem framing. In the climate case knowledge since 1995 is based also on actual observations (IPCC 1995).

This change in framing from future to current problem did not just mean a change in how novel the issue was, but also in its *proximity*. One of the major difficulties for knowledge brokers in the 1970s and 1980s was that climate change was seen as a problem for the future, connected also to how incidence was understood. Although knowledge brokers framed the issues as requiring immediate political action, Swedish policy-makers in the 1970s reframed the problem to a problem for the future. When the IPCC reported actual climate changes, it became impossible to reframe the issue as something distant.

Finally, to frame a problem in terms of *crisis* means to increase the perceived severity and proximity of the problem. Climate change has by some been framed as the crisis of our age. However, this has been rejected by most knowledge brokers as counterproductive. Despite the fact that a single natural accident cannot be connected to climate change, the belief that the incidence and severity of, for example, floods and storms have increased, have at times generated heightened public and political attention. Focusing events, as Kingdon would call it, like hurricane Katrina that hit New Orleans in 2005 or the storm Gudrun that hit Sweden the same year, have definitely given framings of climate change a sense of severity and proximity.

It is not clear from Rochefort and Cobb's argument, which factors are more crucial and under what circumstances they will be important. One way of understanding the different factors are that they together build a frame or create a story of a problem. The story needs both an idea of the problem, as captured in numbers or indicators about severity and incidence as well as in an understanding of causality, and an idea of what to do about it, including symbols of proximity, crisis and who to blame. However, what is missing in Rochefort and Cobb's account is an appreciation of how problem framing relates to the political context in which it is made. One could argue that the listed factors will always be important for getting political attention to a problem. However, the storytelling perspective indicates that there is more to problem framing than this. This is also consistent with the MSF, and its focus on the need for policy entrepreneurs to be in the right place at the right time.

Knowledge brokers need to know something about what is going on in the political stream. This includes the national mood that partly determines what issues can be considered and how, as well as possible policy windows. In the Swedish case this became obvious in the 1980s. In 1980, Sweden held a referendum on nuclear power and decided to phase out nuclear energy. This reduced the political interest in framings of climate change as an urgent political issue, as coal, oil and gas were seen as the natural alternatives to nuclear energy. This situation endured until the publication of the Brundtland report in 1987. In these years it was virtually impossible to get policy-makers to seriously consider climate change.

This means that successful problem framing cannot be seen as separated from the political context, but that when a problem frame resonates with the national mood the frame is likely to take hold. It should be emphasized that this is not the only way to understand what successful means. If a knowledge broker aims to radically change the perception of a problem, it might be less effective to try to frame it in congruence with the national mood. In this case it would be better to challenge it (cf. Ferree 2003). This would then have to be done over a longer period of time.

The conclusion about successful problem framing is that we need to study both the knowledge broker who tries to introduce a certain problem frame to policy-makers and if the frame becomes accepted by policy-makers. Based on the case study, knowledge broker's access to policy-makers are crucial as well as their credibility as knowledge brokers. Fundamental is also their persistence and their willingness to act. To understand successful problem framing we also have to study the problem frame as such and how it is connected to the general political debate and national mood.

### **Moving between streams**

In the MSF there is no theoretical assumption that actors act only in one stream. However, Kingdon (2003, 17f) argues that even though it is possible for actors to move between streams, many becomes specialized in one. Nevertheless, some criticism of the MSF focuses on the movement of actors between streams and uses this to argue that the independence of streams is falsified (e.g. Robinson & Eller 2010). There will surely be differences between policy areas and types of actors, where some types will be more prone to move between streams than others. This is to a large extent an empirical question. It is the non-movement between streams that needs to be explained rather than the movement. One way of understanding why actors choose to stay in one stream is that movement can be limited by institutional constraints. Different types of actors will be subject to a varying degree of institutional constraints. The less constraints there are, the higher the likelihood

actors will move between streams. This is the case with parents in Robinson and Eller's (2010) study of school politics. In climate change politics, it was obvious that some actors were bound by institutional constraints. This was especially the case for scientists. The longstanding tradition of science as a neutral actor, based on the Mertonian ideals of universalism, communism, disinterestedness, and organized skepticism (Merton 1973), constitutes strong norms for scientists in academia. In this view the role of science in society is based on its separateness from the political system. Even if this understanding of science is incorrect, it still constitutes a strong norm for scientists. This implies that many scientists are unwilling to move into the policy stream, which is seen to be about values rather than facts. Bert Bolin, for example, strongly believed that scientists could act as knowledge brokers but should avoid the role of policy entrepreneur (cf. Bolin 1994a, 2007, 48f). In the studied case, even in the role of knowledge brokers some scientists became criticized for taking a stance. The critics argued that the scientific uncertainty about climate change was too large to draw the conclusion that climate change should be framed as a political issue (cf. Colglazier 1991).

There will most likely be a large difference between scientists in "pure science" and in applied science, or what Jasanoff (1990, 78f) calls research science and regulatory science. In the latter focus is moved from problems to the solutions and their applications, often in close collaboration with industry and bureaucracy. Scientists working within regulatory science cannot restrict themselves to act as knowledge brokers, but must advocate a certain solution. Therefore, their institutional framework pushes them into the role of policy entrepreneur. This coincides with Kingdon's (2003, 55) finding that scientists will be more influential in the policy stream.

For different types of actors, apart from scientists, these institutional constraints will be felt to different degrees. Some categories of actors will probably be only slightly influenced by these constraints, whereas others will be steered to a high degree. Moving between streams therefore depends on the institutional context for a certain type of actor, but will also differ between countries. This is a question for further studies.

## **Conclusion**

My argument in this paper is that by introducing the role of knowledge broker into the MSF, a clear analytical separation between the problem and policy streams can be established, which enables a closer study of the problem stream. Moreover, it shifts focus from Kingdon's preoccupation with types of actors to what these actors actually do. This makes the question of who does what into an

empirical issue rather than a theoretical one. The focus on knowledge brokers and the way they frame conditions as political problems buildson the MSF and makes it easier to apply in different contexts. This inclusion also enables us to study who gets to talk and who is listened to—in other words what makes problem framing successful. Based on the case study of climate change politics (Knaggård 2009, 2014a), I argue that access to policy-makers and time to advocate a certain frame are crucial, just as it is for the success of policy entrepreneurs. The credibility of knowledge brokers was also important in the studied case. In agenda setting theory focus has been placed on the characteristics or the problem frame. This also had significance in the case, but I argue that it has to be seen in context. This means to analyze how the problem frame corresponds to the national mood and how that mood determines what issues can get attention at a certain point in time. Knowledge of this has to be possessed by knowledge brokers. The main contribution is that the inclusion of knowledge brokers and framing in the MSF emphasize agency in the problem stream. The final argument of the paper is that there is a need to focus on institutions and how they constrain actors from moving between streams.

The theoretical development of the MSF suggested here complicates the alluring simplicity of the framework. The benefits of the development will be most visible in studies where actors chose to stay in the problem stream. Their impact on agenda-setting is difficult to capture with Kingdon's version of the MSF, even if the essence of framing conditions as political problems is there. However, the benefits go beyond such studies. The largest benefit of strengthening the focus on roles in the MSF is that many issues that today are discussed as theoretical can be seen as empirical and therefore possible to study in different contexts. We can then study what roles different actors play in different countries and problem areas. Depending on how the communication between knowledge brokers and policy-makers are institutionalized we will see different results in terms of both types of actors and the success of problem framing. This could be just as important for understanding agenda-setting as the work of policy entrepreneurs. More studies of differences between countries and problem areas pertaining to problem framing and its effects are therefore needed.

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