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The Multiple Streams Framework and the Problem Broker

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Abstract

John Kingdon's Multiple Streams Framework (MSF) constitutes a powerful tool to understand the policy process, and specifically agenda-setting, through three separate streams – problems, policies and politics. This article argues that the MSF would benefit from further development of the problem stream. It introduces a clearer conception of agency into the problem stream by suggesting the inclusion of the problem broker. The problem broker is a role in which actors frame conditions as public problems and work to make policy-makers accept these frames. The problem broker makes use of knowledge, values, and emotions in the framing problems. The use of these three elements is, in the article, seen as a prerequisite for successful problem brokering, that is for establishing a frame in the policy sphere. Other important factors are persistence, access to policy-makers, credibility, and willingness. Problem brokers also need to know whom to talk to, how, and when in order to make an impact. The context, in terms of, for example, audience and national mood, is also crucial. The inclusion of the problem broker into the MSF strengthens the analytical separation between streams. According to Kingdon, policies can be developed independently from problems. The MSF therefore enable a study of policy generation. The inclusion of the problem broker, in the same sense, makes it possible to study problem framing as a separate process. The concept of the problem broker further enables a study of actors that frame problems without making policy suggestions. The MSF is, in its current form, not able to capture what these actors do. The argument is that it is crucial to study these actors, as problem framing affects the work of policy entrepreneurs and thereby agenda-setting and decision-making.

INTRODUCTION

The Multiple Streams Framework (MSF), as developed by John Kingdon (2003/[1984]), constitutes a powerful tool to understand policy processes, especially agenda-setting. The MSF builds on the idea that the policy process consists of three parallel and mostly independent processes – a problem stream, a policy stream, and a politics stream. This article argues that too little focus has been placed on the problem stream, by Kingdon and others, as compared to the policy stream.

Policy entrepreneurs, active in the policy stream, are the most important actors in understanding agenda-setting in the MSF. They develop policy alternatives and couple them to problems. The

policy entrepreneur works to present a ready package of problem and solution to policy-makers at the right moment. If the policy entrepreneur is successful, the problem will be placed on the political agenda. If the package is rejected by policy-makers, the policy entrepreneur might try to sell the same package at a later point or at a different venue, or try to couple the policy to a different problem. The policy entrepreneur is an important actor, but it is not the only actor that we need to pay attention to. In studies using the MSF the problem and policy streams are often conflated in the sense that the policy entrepreneur is seen as defining the problem through coupling it with certain policy alternatives (e.g. Crow 2010; Houston & Richardson 2000; Lindquist et al. 2010). The article argues that this hides the power present in defining public problems. Public problems are here seen as problems that are understood as in need of political action.

The study of problem definition has long been an important area in policy studies (e.g. Baumgartner & Jones 1993; Rochefort & Cobb 1994; Schön & Rein 1994; Stone 1989; Wood & Doan 2003). The important lesson from this research, completely in line with Kingdon's framework, is that problems do not just appear. Just as policy entrepreneurs try to place packages of problems and policies on the political agenda, so too does someone define problems and try to get attention to them. Problems can be defined in a number of different ways, which implies that problems are always more or less ambiguous (cf. Baumgartner & Mahoney 2008; Zahariadis 2014). This also means that they can be redefined in order to make new constellations of problem and policy possible as well as create new coalitions of interests (e.g. Baumgartner & Jones 1993; Schattschneider 1960). In other words, the definition of problems creates the stage on which policy entrepreneurs act. It does not mean that problems necessarily come first, but rather that the definition of problems and the generation of policies are analytically separate processes. When these processes come together problem definitions fundamentally affect what policies are possible to push, which actors will be interested in the problem, and which institutions will be involved in its management. When a preferred policy alternative can be coupled to several different problem definitions, a policy entrepreneur can choose which problem to use. If there is only one suitable problem definition policy entrepreneurs have to adjust.

The argument here is thus that we must pay better attention to what happens in the problem stream in order to understand agenda-setting. This article will analytically develop what happens in the problem stream. It will be done through the introduction of the problem broker into the MSF. A *problem broker* is here understood as a role in which actors frame conditions as public problems and work to make policy-makers accept these frames. This article makes an argument for, and

analytically develops, the role and tasks of the problem broker. Through this the analytical separation of streams is strengthened, as the idea of agency in the problem stream is more clearly developed. It further enables an analysis within the MSF of actors who define problems, but do not couple them with policies.

The article starts with a discussion of the problem stream in the MSF. Next, it will elaborate on the concepts of problem broker and framing. The different elements in frames of knowledge, values and emotions will be discussed as well as how we can understand success in terms of problem brokering. Finally, some empirical illustrations will be given.

IN THE PROBLEM STREAM

Before presenting the role of the problem broker we need to consider how the problem stream is understood in the MSF. Kingdon was keenly interested in the role of problem definitions. He asked (2003, 17): "how does a given condition get defined as a problem for which government action is an appropriate remedy?" This perspective is congruent with that found, for example, in Baumgartner & Jones (1993). Thus, problems do not exist but have to be defined by someone. Before they become problems they are only conditions. The difference between a condition and a problem is that the latter is seen as something that we ought to do something about (Kingdon 2003, 109; c.f. Baumgartner & Jones 1993; Wildavsky 1979). Two aspects are important here: (1) how this is done, and (2) who is doing it. According to Kingdon (2003, 19), "people define conditions as problems by comparing current conditions with their values concerning more ideal states of affairs, by comparing their own performance with that of other countries, or by putting the subject into one category rather than another" (see also the discussion on pp. 110-113). To start this process indicators, focusing events, and feedback from enacted policies are crucial (Kingdon 2003, 90-100). Regarding the issue of who is doing the defining, Kingdon points out that activists and policy entrepreneurs are highly important for bringing "problems to public and governmental attention" (2003, 115). However, his focus is not primarily on problem definition as such or the people defining problems. Rather, he pays attention to people "in and around government" and why they become interested in certain problems (2003, 90). He argues that the source of ideas is less important for explaining why certain problems are placed on the agenda than "the climate in government or the receptivity to ideas of a given type" (2003, 72f).

This leads Kingdon to emphasize the importance of coupling streams for agenda setting. It is the package of problem and policy and the timing that explains why certain ideas get attention from

policy-makers. This article does not question this, but rather expands on what is already there. The argument developed here builds on the interdependence of streams. Leaving problem definition underdeveloped entails that coupling becomes the same act as defining problems. Thereby the analytical separation between streams breaks down. The point here is that, by focusing only on policy entrepreneurs, we risk missing both how policy entrepreneurs are enabled or limited by how problems are defined and how these definitions affect agenda-setting and policy-making.

THE PROBLEM BROKER

A problem broker is a role in which actors frame conditions as public problems and work to make policy-makers accept these frames. Problem brokers thus define conditions as problems. One aspect is especially important in this definition – that framing a condition as a public problem is done with the purpose of making policy-makers accept it and in the end do something about it. Problem brokering is thereby a strategic act. A range of actors could play the role of problem broker, from those inside government to those on the outside. One advantage of seeing the problem broker as a role that can be enacted is that focus is placed on what actors do rather than on who these actors are.

In the academic literature a number of concepts are used in trying to capture what the problem broker does. In some studies different categories of entrepreneurs are established. One example is the information entrepreneur (Crow 2010). This concept focuses too narrowly on information and disregards that knowledge in problem frames needs to be connected to values and emotions. Other concepts of relevance are epistemic communities (Haas 1992) and advocacy coalitions (e.g. Jenkins-Smith et al. 2014). Both of these concepts refer to groups of actors who share beliefs about a problem and its solution. Both concepts have merits, but do not fit with the MSF as the focus on shared beliefs about problems and solutions makes a separation between streams difficult. It would further make it impossible to capture a group of actors who share views of the problem, but do not agree on the solution. In sociology the concept of claims-maker is used (e.g. Best 2001). In essence, it captures very well what a problem broker does. However, a claims-maker frames conditions as social problems, not as public ones. Due to this it is less suited for the MSF with its focus on public problems and the political agenda. Instead of adjusting the definition of the concept, a separate one is preferable. Problem broker signals a clear focus on the problem stream and places the role within the policy process. Therefore, this article advocates the label problem broker.

The difference between problem broker and policy entrepreneur is fine. In some cases problem definition and coupling will in fact be conducted by the same actor. In other cases there will be a major division of labor between actors defining problems and those coupling these with policies. It is therefore important to point out that the separation between problem and policy stream is analytical. Thus, one actor can be active in both streams without calling the independence of streams into question, as the separation is about tasks and not primarily who performs these tasks. The problem broker makes it possible to independently investigate what is going on in the problem stream. For some types of cases the concept will also empirically be very useful. Those are cases where problems are new or heavily dependent on scientific knowledge. In these types of cases there will likely be a phase where a condition is defined as a problem without reference to more specific policy suggestions beyond the notion that something needs to be done by policy-makers. In this lies the major difference between problem brokers and policy entrepreneurs: the former makes suggestions that something needs to be done, whereas the latter makes suggestions for particular policies.

I have argued elsewhere for the inclusion of the role of the *knowledge* broker in the MSF (Knaggård forthcoming). This suggestion was based on a study of science-politics interrelations in climate change policy-making (Knaggård 2009, 2014). In that study it became apparent that some actors, foremost scientists, clearly advocated the problem as public, but still refrained from making any suggestions vis-à-vis policies. That is, they deliberately refrained from acting as policy entrepreneurs. It was also clear in the study that these actors played a significant role in determining how problems should be understood and thereby created opportunities for some policy entrepreneurs while making it more difficult for others. The concept of knowledge broker, as formulated by Litfin (1994), nicely captured what was going on.

By using the concept of knowledge broker we direct attention to a particular group of actors who define problems as public, namely scientists. Both Litfin's and Knaggård's studies were focused on scientific actors. This focus excludes other possible problem brokers. Even though it is possible to argue that scientists are more likely to delimit themselves to problem definitions than other actors, this should not be taken for granted, but rather be studied empirically. A further reason for broadening the possible types of brokers is that knowledge is only one part of a problem frame. Therefore, the wider concept of problem broker is introduced.

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FRAMING

Now we turn to what problem brokers do. As already stated, they define conditions as public problems. The process in which they do this can be understood as framing. The literatures on problem definition and framing overlap to a large extent. They share the basic premise that every problem can be defined, or framed, in a number of different ways, and that this has implications for policy-making. The reason for using framing instead of problem definition is that it captures a process rather than a state. The process is also more universal. Defining a problem can thus be seen as one type of framing.

The literature on framing is divided along different lines. The most important division here regards the focus (cf. Druckman 2001). Some scholars emphasize cognition and the individual level. They study how individuals come to frame problems to make sense of these and their world, as well as how the frames of others affect the way individuals perceive of problems (e.g. Chong & Druckman 2007; Druckman 2001; Goffman 1974; Tversky & Kahneman 1981). Other scholars focus on an aggregated level. They study the role of framing either as the influence of media on the public (e.g. Entman 1993) or as the influence of a number of different actors on agenda-setting and policy-making (e.g. Baumgartner & Mahoney 2008; Benford & Snow 2000; Kangas et al. 2014; Schön & Rein 1994; Wolfe et al. 2013). The aggregated level is most relevant to this article.

There are a number of different definitions of framing, of which most are rather vague. Here framing will be understood, in the words of Entman (2004, 5, italics removed), as "selecting and highlighting some facets of events or issues, and making connections among them so as to promote a particular interpretation, evaluation and/or solution". To frame a condition as a problem thus means to highlight some aspects over others. It implies defining the condition, not just as a public problem, but as a *specific* public problem. In Kingdon's account this idea can be found in his discussion of how subjects can be placed in different categories (2003, 111). Zahariadis (2003), in his work on the MSF, has used framing as a tool that policy entrepreneurs use. He does not focus primarily on how problems are defined, but rather on the entire package of problem and solution. Entman's definition is rather inclusive and refers to the general process of framing, which can incorporate the framing that Zahariadis discusses. In the context of the problem broker framing is about problem definition. The frames that problem brokers use, here referred to as *problem frames*, have as their most important component a definition of the problem. It includes what the problem is about, who is responsible (the public or someone else), and why we should do something about it (cf. Schön &

Rein 1994). These aspects are seldom explicitly stated, but are important underlying components of frames. The frame thereby entails much more than it expresses. Frames can thus be seen as shorthand for more elaborate stories (e.g. Stone 1989) or narratives (e.g. Patterson & Monroe 1998; Shanahan et al. 2011). Due to this, frames will come in many different forms and shapes, and it is not possible to determine one linguistic shape of frames. What forms a frame will take have to be established empirically based on the context. This also necessitates a rather broad definition.

The process of framing conditions as public problems is an on-going one. There is a constant struggle over definitions. This is highlighted by, for example, Baumgartner and Jones (1993) and in Schattschneider's (1960) concept of the mobilization of bias. Gusfield (1981, 15) states that "[t]he structure of public problems is … an arena of conflict in which a set of groups and institutions … compete and struggle over ownership and disownership, the acceptance of causal theories, and the fixation of responsibility". By ownership he means a situation where the frame of a specific actor has come to dominate the understanding of a problem.[1] This struggle can result in the reframing of a problem. This, in turn, can open up possibilities to couple the problem to new types of policy alternatives. Framing delimits the span of conceivable policies that can be attached to a problem. Reframing can change that span, so that what previously were seen as valid solutions no longer can be seen in that way. However, Wolfe et al. (2013) suggest that even if reframing is possible it is often unlikely.

The issue of ownership highlights the important connection between framing and power. Framing can be a tool to control how an issue is understood by policy-makers and the public, thereby molding the political debate. Problem brokers can, in a situation of ownership, function as gatekeepers who control what is perceived to be at stake and what arguments are valid.

KNOWLEDGE, VALUES, AND EMOTIONS IN FRAMING

All problem frames, to some extent, include elements of knowledge, values, and emotions. They incorporate some form of knowledge of what the problem is about. Further, they allude to values that tell us why we should care. Finally, they also include elements that steer emotions. The emotional element sets the *tone* for how the problem should be understood (cf. Baumgartner & Jones 1993). Even though all frames can be seen to be based on all three elements, the balance between them in particular frames will vary to a high extent. The balance depends on who acts as problem broker, what audience is targeted, and what the problem area is. Before expanding on this,

I will deal more in depth with knowledge, values, and emotions as tools that problem brokers can use.

Knowledge

There is no doubt that knowledge is a crucial part of almost all framings. A frame needs to entail some idea of what the problem is about, which is based on some form of knowledge about a condition. This knowledge can be based on personal or bureaucratic experience, or on scientific research. One of the most authoritative forms of knowledge is scientific. Goodwin et al. (2001, 15) argue that "science is the dominant language of legitimation and persuasion in today's liberal societies". The authority of science is based on the idea of science being neutral and thus able to judge between alternatives without partisanship (cf. Pielke 2004). Research has shown that scientists cannot be seen as neutral in this ideal typical way (e.g. Latour & Woolgar 1979). What is important for the authority of science is therefore not neutrality as such, but the belief in it. The point is that problem brokers can use the cognitive authority that science and scientific knowledge are seen to possess in order to strengthen the validity of their frames.

Knowledge about a condition does not have to be scientific. Many problems are rather framed through some form of bureaucratic experience or professional knowledge. For example, problems in health care due to an aging population are to a large extent not framed by science, but by people working within health care. This can be seen as a form of what Kingdon (2003, 90-100) would call bureaucratic knowledge, including routinely measured indicators and feedback concerning enacted policies. I would argue that professional knowledge not only includes this aggregated understanding of the problem, but also individual perceptions of it. The experience of these professionals, as they go about their work, does influence the more general perception of the problem. Jasanoff and Martello (2004) refer to this as local knowledge. It can be understood as "situated" and based in particular experiences.[2]

Local knowledge also includes the everyday experience of lay people, both in the form of individual and collective experiences. Since this type of knowledge has a lower status than scientific knowledge, it will have less value in making persuasive framings. However, there are situations in which scientific knowledge is unavailable or unhelpful for substantiating a certain way of understanding a problem. Under these circumstances local knowledge can be used instead. Also, local knowledge can be crucial in resisting already accepted frames. Lay people affected by political decisions might hold a different understanding of causal relationships based in their practical

experience than policy-makers do. In efforts to reframe a problem local knowledge can point to alternative understandings of the problem, and thus open up for alternative policies.

Values

What is apparent in the concept of framing is that knowledge is not enough for constructing a persuasive frame. Beyond an understanding of the problem it needs to be based on ideas of why we should care – in other words on values. These values do not only tell us why a problem is important, but can also point out who is responsible for acting on the problem. To connect a problem to values means to state what is at stake – what is threatened by the condition or what needs to be protected. Values are connected to "more ideal states of affairs", in Kingdon's (2003, 19) words. It is the comparison between conditions and these ideal states that motivates action. Some values are more general than others in the sense that is hard to speak against them. Most values, though, are ideological in the sense that the same ideal state can be connected to different values depending on what one thinks is at stake. Education for everyone can be understood as an issue of freedom to choose or as an issue of equality.

Problem brokers – whether scientists, professionals or others – have to connect their knowledge of a problem to some value in order to demonstrate what is at stake and to motivate political action. Some problem brokers are comfortable in emphasizing values when they frame problems, for example policy-makers, whereas others rather try to avoid them, for example scientists. Kangas et al. (2014) argue that values often are more effective than knowledge in making a frame accepted, as values to a higher extent are shared in society (cf. Rochefort & Cobb 1994, 5). Chong and Druckman (2007, 111) also argue that knowledge is often less important for making frames strong, whereas a connection to ideology can have that effect. This implies that actors connected to the policy sphere might be more successful as problem brokers.

Emotions

The third element in frames is emotions. Goodwin et al. (2001 , 10) say that "[e]motions are part of the 'stuff' connecting human beings to each other and the world around them, like an unseen lens that colors all our thoughts, actions, perspectives and judgments." Emotions color frames and give them what Baumgartner and Jones (1993, 26) refer to as a tone. The emotional element of frames is therefore rather vague. Here, focus is placed on the effect of emotions on an aggregated or a collective level.[3] Zahariadis (2003) clarifies how emotions can come to the fore in framing through the use of powerful symbols. He also discusses how negative emotions (in terms of loss) or positive

emotions (in terms of gains) have different effects. An example of the effect of the emotional element in frames is that problems can seem more urgent. Urgency can be created through alluding to fear, which can move issues higher on the agenda (cf. Buzan et al. 1998). It also signals a sense of severity and crisis, which are important aspects for getting attention to an issue (cf. Rochefort & Cobb 1994).

As in the case of values, the emotional element can be highly effective in creating acceptance for a problem frame. Problem brokers can also choose to emphasize emotions over knowledge and values (cf. Loseke 2003, 77). According to Loseke (2003, 77), fear about a problem, sympathy for those affected and anger towards those responsible are strong emotional elements that can be used. Emotions are not in opposition to knowledge. However, emotions can be used to motivate action even if there is limited knowledge about the problem. Chong and Druckman (2007, 111) states that "[s]trong frames should not be confused with intellectually or morally superior arguments. They can be built around exaggerations and outright lies playing on the fears and prejudices of the public."

Research is needed to further examine and theorize what effect the emotional element of frames have on the collective processes of agenda-setting and policy-making. Research is also needed to study how knowledge, values, and emotions interplay in frames and how problem brokers choose between them. Comparative studies of different issue areas, countries as well as types of problem brokers are needed.

THE INFLUENCE OF PROBLEM BROKERS AND THEIR FRAMES

We now turn to the question of what determines the influence of problem brokers over the establishment of a problem frame among policy-makers and the people around them. Three elements are important to study: the problem broker, the audience, and the frame. Here most attention will be paid to the problem broker and the relation to the audience. First some aspects of the problem frame are touched upon.

Chong and Druckman (2007) argue that there is a lot of context-specific, but very limited general knowledge on successful framing. One way of understanding success is to see it as partly based on coincidence. In the MSF coincidence is an important aspect – who happens to be at a certain place at a certain point in time is crucial for agenda-setting. The context in terms of, for example, the

national mood[1] (Kingdon 2003) is important for the way a frame will be received and also for the way problem brokers chose to frame problems. Due to the importance of context (cf. Wolfe et al. 2013) a general theoretical explanation of successful framing might be difficult to formulate.

Success can also be understood as the pervasiveness of a frame. Established frames based foremost on knowledge are more difficult to challenge, as this has to be done through other knowledge claims that are perceived to have cognitive authority. Frames based foremost on values can easily be challenged by other values. For example, freedom is often seen in opposition to equality. Other values, like justice, are more difficult to challenge. Emotionally based frames are also easier to challenge. The reason is that no specific authority is needed. It is individuals who feel emotions, which implies that everyone can challenge such frames. However, if a frame based on strong emotions takes hold it will probably be more difficult to reframe, as it is not connected to knowledge or logic and therefore cannot be overthrown by knowledge claims.

The discussion of what signifies a successful problem broker will be structured by Dahl's account of political influence. He divides factors into (1) political resources, (2) skill in using those resources, and (3) the willingness to use them (1991, 35f).

Political resources of the problem broker

In the context of the problem broker the most important political resources are persistence, access, and credibility. Just as for policy entrepreneurs, persuading an audience to accept your frame can take time. *Persistence* is therefore crucial. Many studies of problem definitions show that it is often not easy to establish a problem frame (e.g. Harremoes et al. 2001; Knaggård 2009). Just as the policy entrepreneur is softening up the system with repeated efforts to convince policy-makers to adopt a certain policy (Kingdon 2003, 128), so too do problem brokers need to soften up the system to their problem frame.

A second crucial political resource is *access* to policy-makers. According to Kingdon (2003, 56), scientists with what he calls an "inner-outer career", meaning a career both in academia and in the political system, will have an advantage over scientists who do not pursue such a double career. This also holds for other problem brokers, like people in interest organizations or business. Through a double career you establish networks in both systems, which you can utilize when brokering a problem frame. Knaggård (2014), in a study of Swedish and international climate change policy-

[1] With national mood Kingdon (2003, 146) means "that a rather large number of people out in the country are thinking along common lines".

making, has shown that it was problem brokers on the inside of government or with well-established contacts with the government that most easily could influence the problem frame. One reason could be that people on the inside are more aware of the national mood. Someone on the inside would also have a better understanding of how to make policy-makers accept a certain frame. It is also possible that direct communication can have a positive influence on how successful a problem broker is.

A final political resource is the *credibility* of a problem broker. Druckman (2001) argues that the credibility of a source is a prerequisite for successful framing. This indicates that it is not so much the frames that are important, but rather who plays the role as problem broker. When it comes to knowledge, Boswell (2012) has shown that policy-makers often use it to lend legitimacy to decisions. Here it is not the quality of knowledge per se that is important, but the credibility, or status, of the problem broker. Loseke (2003, 36) argues that there is a hierarchy among problem brokers, or claims-makers, where scientists are highest ranked. For certain issue, she argues, professionals are ranked higher. This hierarchy is based on the cognitive authority of science, as discussed above. Even if scientists are on top, this does not mean that all scientists hold such a position. There are struggles for ownership of problem frames within science as well. In the same way there is a hierarchy among problem brokers basing their frames foremost on values or emotions. One possibility is that problem brokers who are perceived to be victims or heroes might have higher credibility than others. This has to be studied further.

The skill in using political resources

The second aspect of influence that Dahl highlights is the skill in using one's political resources. One important aspect when it comes to problem brokers is to know the audience. It means to know whom to talk to and how, as well as when to talk. *Whom to talk to* is highly context dependent. Problem brokering is most effective when the audience has real influence over how a problem should be understood in the political context, preferably someone who can couple streams. Depending on issue it could be civil servants at national agencies or within government, but also a politician interested in the issue. Whom to talk to depends, among other things, on the country and on the issue. A problem broker with experience from the inside will have a better knowledge of how the system functions and whom to talk to than problem brokers without experience from the inside.

When the problem broker has decided on an audience, a second aspect of using one's political resources is to adjust the frame so that it fits that audience – *how to talk*. According to Loseke (2003,

27) "[a]udiences are critical because a … problem is created only when audience members evaluate claims as believable and important". This means that if a problem broker fails to do this, the frame will not take hold. It is therefore crucial that the problem broker is able to adjust a frame to fit the intended audience. This is partly connected to the national mood. Simply put, it is probably more difficult to get attention to a political problem if it is framed in a way that does not fit the national mood (cf. Benford & Snow 2000; Kangas et al. 2014). It is also important that the problem broker can frame the problem so that the audience can understand it. An overly technical language might be too difficult. Further, depending on audience, the balance between knowledge, values, and emotions has to be adjusted (e.g. Baumgartner & Mahoney 2008). If the audience consists of specialized civil servants, a knowledge-heavy frame functions, as these civil servants have the prerequisites for understanding that type of arguments and can use them to legitimize political action (cf. Boswell 2012). If the audience consists of politicians, the media, or the public at large, value and emotional elements become more important.

A final skill is to know *when to talk* – to have a sense of timing (cf. Kangas et al. 2014). A problem broker needs to be active long before the problem comes up for decision. One way to get ownership of a problem frame is to be first in framing that particular condition as a public problem. At the point when policy-makers have accepted a frame, it is difficult to make them accept a reframing (cf. Littoz-Monnet 2014; Wolfe et al. 2013). The skill of knowing when to talk is also connected to the concepts of national mood and policy window in Kingdon's vocabulary. It is crucial to have some feeling for the national mood, as it can open up possibilities as well as shut them down. Policy window is a concept that captures moments in time when it is possible for policy entrepreneurs to couple a policy to a problem and get attention from policy-makers. These policy windows can be regular events, like budget decisions or elections, but they can also be more random ones (Kingdon 2003, 166ff). A problem broker needs to know when such windows, or access points, are coming up. Windows especially important for problem brokers could be hearings or committee work.

Willingness to use political resources

The third aspect of influence is the extent to which one is willing to use one's political resources. Scientists often have advantages as problem brokers as they hold high credibility and can use the cognitive authority of science to make an audience accept a frame. However, many scientists seem unwilling to act as problem brokers. One reason could be that they need to include value and emotional elements in the frame besides knowledge, which goes against the idea of the neutral scientist. Interest organizations, on the other hand, often have fewer resources than scientists for

getting attention to their frames. Yet that is to some extent outweighed by the time they can spend on it and their willingness to do so.

Different actors hold different resources and skills in using them. They are also willing to use them to different degrees. The influence of particular problem brokers depends not only on these factors, but also on the competition from other problem brokers at a particular moment. According to Souders and Dillard (2014), the existence of competing frames makes success more difficult. Without competition from stronger problem brokers, even those with fewer resources might succeed in gaining acceptance for their frames.

EMPIRICAL ILLUSTRATION

To illustrate the arguments made above, three examples are presented from a case study on the evolution of Swedish and international climate change policy-making from 1975 to 2007 (Knaggård 2009, 2014).

The first example, the creation of the IPCC (Intergovernmental Panel on Climate Change) in 1988, illustrates the empirical value of including the problem broker in the MSF. The first chairman of the IPCC, Bert Bolin, strongly believed that the role of scientists was to inform policy-makers, but to refrain from any policy suggestions (e.g. Bolin 1994a; cf. Agrawala 1999). According to him, "[s]cientists as well as politicians need to recognize their different roles... Scientists need to inform politicians in a simple manner that can be readily understood, but the message must always be scientifically exact" (Bolin 1994b, 27). This position was instrumental in the creation of the structure and objectives of the IPCC. The panel should make assessments of scientific knowledge and communicate it to policy-makers. This structure enables problem brokering, but stays clear of policy entrepreneurship. It has had a major impact, for example, on the unwillingness of the IPCC to suggest global warming objectives (Knaggård 2014).

The second example is about the influence of Bert Bolin, Professor of Meteorology at Stockholm University, on the acceptance by Swedish policy-makers of the frame of climate change as a public problem. It illustrates some of the resources and skills that successful problem brokers need. Bolin acted as problem broker already in 1975, although this attempt to get political attention had limited success (Knaggård 2014). He worked persistently to establish climate change as a public problem all through the 1980's (Agrawala 1999). In 1986 he became affiliated with the Swedish Executive Office under the Social Democratic government as expert, a position he retained until 1991 (Knaggård

2009). This position strengthened his access to policy-makers and his knowledge about the system. Later he took part in a Swedish expert committee on climate change and several parliamentary commissions (Knaggård 2009). In many other countries Bolin's and the IPCC's problem frame, seeing climate change as caused by human emissions with possibly serious effects and therefore a public problem, was challenged by problem brokers who, for example, emphasized natural causes of the problem and therefore downplayed the need for action (see Grundmann 2008; Skolnikoff 1997). This frame was presented also in the Swedish context, but received little attention (Knaggård 2009). The main reason for this was the presence of Bolin as problem broker. He was persistent in his attempts to frame the issue as a public problem and he had access to policy-makers in government (1986-1991) and later in the parliament (through the parliamentary commissions). He also possessed a high credibility as scientist, being one of the leading international meteorologists and the chairman of the IPCC. Through his access to the scientific and policy spheres he had knowledge about whom to talk to, how, and when. Finally, he was also willing to act a problem broker. The problem brokers who tried to establish alternative frames lacked access and, compared to Bolin, credibility. Even if they were persistent and willing to act a problem brokers this was not enough (Knaggård 2009).

The last example is intended to illustrate how knowledge, values and emotions interplay in framings. In most problem frames during the 1980's that framed climate change as caused by human emissions focus was on knowledge and the scientific description of the problem (e.g. WMO 1986). However, these frames also played on emotions. For example, the so called Brundtland report from 1987 frames climate change as a public problem and sets a tone of urgency by evoking emotions of fear for future climate change (WCED 1987, 177). The Brundtland report does not explicitly mention certain values that should be protected, but the frame implicitly emphasizes values like survival, food security and economic security. In the same way other problem brokers at this time emphasized urgency. This example illustrates how even knowledge-based frames do include elements of values and emotions.

CONCLUSION

By including the role of the problem broker into the MSF two objectives can be reached. The first pertains to the analytical separation of streams within the MSF. Through the inclusion of agency in the problem stream and an account of how conditions become public problems, the difference between problem and policy stream can be analytically strengthened. This is important as problem definitions and the work of problem brokers have impact on policy entrepreneurs, and, by extension, on the forming of the agenda and decision-making. The second objective is to enable a

more elaborate analysis of actors who are framing conditions as public problems without making policy suggestions. Cases where policy entrepreneurs also frame problems can already be studied within the MSF, but without the problem broker we will miss what these other actors do. To study actors who only frame problems will be important foremost in the early phases of problem definition and particularly in scientifically dominated issues, like climate change. What this concept enables is a focus on what actors are actually doing rather than on what they are. This builds on the idea of roles present in the MSF through the policy entrepreneur.

The article has further argued for the importance of studying elements of knowledge, values, and emotions in frames. All frames must contain some reference to these three in order to get attention. By focusing only on knowledge we will have difficulties in explaining why some problem frames get attention whereas others do not. As discussed, values and emotions are often more important for creating a successful frame. In order to be successful, problem brokers further need to be persistent, have access to policy-makers, and be seen as credible. They also need to know whom to talk to, how, and when in order to make an impact. Finally, problem brokers need to be willing to frame conditions as public problems. This article has argued that these factors to some extent can explain why certain frames take hold. It is important, however, to also study the context. The audience does matter as well as the national mood. Coincidence in the sense of who happens to be at a certain place at a certain time seems to be crucial, making it difficult to formulate a more general theory of successful problem framing. However, we can increase our understanding of factors necessary for successful problem brokering. This article has only been able to point at important factors, but lacks the empirical base that is needed for such theoretical development.

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[1] Compare also with 'policy monopolies', defined by Baumgartner and Jones (1993, 7) as a situation where a problem is controlled by one institution with the aid of a "powerful supporting idea".
[2] Jasanoff and Martello (2004) argues that all knowledge, even scientific, is situated.
[3] As with frames, emotions are always grounded in individual cognition, meaning that it is individuals who feel emotions. When studying agenda-setting and policy-making it is the aggregated effects of emotions that are in focus.

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