Visual Culture and Public Policy-Making

Victor Bekkers – Rebecca Moody
Burgemeester Oudlaan 50, 3062 PA Rotterdam. 010-4082053
bekkers@fsw.eur.nl, moody@fsw.eur.nl

October 7th 2009

1. Introduction

In 2006 Al Gore presented his film 'An Inconvenient Truth', here he tried to convince the world global warming will have a significant impact on our daily lives. The flow of water covering large parts of the world was pictured and figures from different kinds of scientific reports were shown. Our imagination was stimulated and the movie made sure a radical change was necessary. This is one of the many possible examples which show images play an increasingly important role in the world of public policy-making. This increasing importance of images can have consequences for public policy-making and politics. The question we need to ask ourselves is what this influence of images and the increasing importance of these images actually is on public policy-making. How do these images influence the course, the content and the outcome of processes of public policy-making? In order to research this we have formulated the following research question:

What is the influence of the increased penetration of visual technologies in our society on the course, the content and the outcome of processes of public policy-making?

What is important here is not just to look at the influence of the increased penetration of visual technologies in our society on the content, the course and the outcome of public policy-making but to look at this on the basis of the interaction between different actors in policy-making processes. In this interaction images are used to frame policy problems and solutions, this process of interpreting, distributing and giving meaning to these images influence the outcome, the course and the content of the policy-making process.

When looking at the increased importance of images a shift can be noticed from a policy practice in which words and metaphors are used to stimulate collective and political imagination to a policy practice in which video, photo, film, 3-D and 4-D simulations and virtualizations are being used to frame policy problems and policy measures. The present awareness of images has also affected public policy and seems to be compulsory, since images create and contest meanings, and relate to other meanings in the public domain. (Mirzoeff, 1999)
In our research we want to explore this influence of the visual on public policy-making. What exactly is the influence of a so called visual culture on the policy process in terms of content, the course and the outcome? The goals of our research will be five fold:

1. to describe and analyze the increasing emphasis and focus on images, 3-D and 4-D visualizations, in the light of past developments but also in today's public policy-making.
2. to describe and analyze the emergence, features and characteristics of a visual culture, also referring to mass media, network society, economy of experience, drama democracy and the symbolic society.
3. to analyze the changing role of technology in the making and the distribution of images.

4. to analyze the role of images and visualization in the process of framing policy problems, solutions and results in terms of public policy.
5. to analyze the way in which policy-makers, experts and citizens use visualization as a policy instrument

It is important to note that the proposed research on the influence of imaging and visual culture on public policy-making sheds new light on the public policy making today. Several researchers have already addressed visual culture in the sense of rhetoric, the visual as practice and in terms of semantic value of images (Barnhurst et al., 2004). An account of how these images actually affect policy-making has not been developed as of yet. For framing the same goes, studies are conducted on framing in terms of words but not in terms of images and visuality. This account could enhance our understanding of new media and new information and communication technologies and lift the knowledge on public policy-making to today's level.

In order to do so we will start of with visual culture itself. What it entails, how it has developed and what its characteristics are. Secondly we will look at public policy-making. Some theoretical insights will be given on the impact of the visual on public policy-making, the concept of framing will be elaborated on and the policy process will be looked at. Furthermore we will break open the black box of technology. The technologies used to produce and distribute images should not be seen as given but influence the policy process as well, as will be demonstrated. This will all come together into a conceptual framework which will be used to analyze case studies. A justification for methodology will be given and the case study selection will be looked at. Finally an account will be given of the planned deliverables and knowledge dissemination.

2. Visual culture

When researching the influence of the increased penetration of visual technologies in our society on public policy-making first of all it is important to look at the increased importance of images itself. The first thing which comes to mind is the term visual culture. When looking at the concept of visual culture it is important to define what visual culture entails. Mirzoeff defines visual culture as being concerned "with visual events in which information, meaning or pleasure is sought by the consumer in an interface with visual technologies (Mirzoeff, 1999). Furthermore it is important to understand that a visual culture does not exist in a vacuum. It is integral to ideologies and power relations within a social context (Sturken & Cartwright, 2001).

It must be established that visuality and the expression of thought, meaning and ideas is not new. A history of the visual can be found firstly by statues, sculptures and paintings, (Boorstin, 1992). When comparing visuality with forms of rhetoric we will also deal with metaphors, myths, metonyms and symbols (Fiske, 1990; Van Twist, 1994). When coming to more modern times we see the emergence of first photography followed by film and video. Additionally to this we must notice the emergence of multi-media and web 2.0 technologies. These technologies invite users to generate content themselves and this content can be distributed very quickly. These different technologies of expression help us understand the range of imaging possible and help us understand the emerging of a visual culture with its features and characteristics (Gorman & McLean, 2003).

The emergence of a visual culture in nowadays society can be seen in the light of three developments. Firstly there is the penetration of television in our daily life. In contrast to news papers, television stimulates our association much more than the printed word which is more based on reason and order (Castells, 1996). Secondly, there is the rise of the multi-media networks and systems, in which pictures and videos are integrated with sound and words. The third development is the increased interactivity of these new (multi)media, which comes also forward in the emergence of web 2.0 technologies. Web 2.0 has been called the 'social web',

because its content, in terms of the creation and sharing of experiences, can be easily generated by individual users as well as the collective intelligence of users (Boulos & Wheeler, 2007). Users are not the passive consumers of content but function as co-producers and co-creators, which presupposes interaction. In expressing these experiences, pictures and videos have become very important (such as YouTube and Facebook).

However, the emergence of a visual culture does not stand alone, it is influenced by other developments and it, in its turn influences other parts of culture. First of all the network society, according to Castells (1996) a virtual culture is a manifestation of a network society. Also a process of digitalization has emerged, leading to multifunctional and smart devices making sure it becomes possible to phone, use the Internet and use multimedia among other things (Castells, 1996). Secondly we see a culture of real virtuality, a culture that is organized around electronic media (Castells, 1996). This influences politics severely, politics itself has become intertwined with the pervasiveness of the media, and these media play an important role in the production and distribution of images. A third development which naturally is important in the context of the question asked in this research is the penetration of mass media into society, and then with special attention to web 2.0 applications and their relationship with traditional media. (Street 1991) Here it must be recognized that the media do not only distribute knowledge but also construct reality. In this framing process images and visualization play a large role and a shift is to be noticed from more text-based framing to image-based framing (Street, 1991). Fourthly a development can be noticed, termed the experience economy, not only does the media help us share images and knowledge but increasingly it facilitates us in sharing experiences. Words alone are not enough to give people this experience, this memorable instance; images are needed to 'sell' the experience (Pine & Gilmore, 1999). A fifth development can be found in the symbolic society, here we see that traditional frames, like religion and tradition are no longer the dominant frame in decision making, new frames like symbols linking to knowledge and information (Elchardus, 2002). A final development is the drama democracy, ideology has lost its significance and politics are personalized and the media has a prime role here (Elchardus, 2002). They decide what to distribute and the more unusual the occurrence the sooner they will report on it (Luhmann, 1990).

Even though the goal of our proposed research is to research the influence of images on processes of policy-making it must not be left unnoticed that the concept of a visual culture does not only exist in the relation between politics and the public but also in the scientific community. In the making of public policy scientific insights are important for the content and the outcome of this process. Therefore the relation between the scientific community and the increased importance of images will be looked at as well. The trends mentioned above have also accounted for a paradigm shift in the use of visual representations in sciences (Daston & Galison, 2007). There are three different areas of scientific visualization to be distinguished between. Firstly there is the artistic, where the scientist accentuates certain details which fit his view on reality, at the same time he omits the other parts of the visualized thereby omitting the noise. Secondly there is the way to visualize occurrences as objective as possible within the complexity of the science. Finally the scientist can interpret the data and visualized the data within his interpretation, which is called 'trained judgement'. In science the data for the visualization is dealt with differently than when speaking about the public. Ware (2000) argues that the process of visualization in science consists of four different stages. Firstly the data is stored and collected. Secondly the data needs to be pre-processed to align it with the forthcoming visualization. Thirdly the technology to display the image needs to be selected and collected and finally the receiver of the image must be taken into account (Ware, 2000).

Several technologies are used to create these images. Visual technologies are defined as "any form of apparatus designed to be looked at or to enhance natural vision, from the oil painting to the internet" (Mirzoeff, 1999). Typical for a visual culture is first, besides textuality, pictures have become increasingly important (Mirzoeff, 1999). An indication is the emergence of a complete

industry producing and distributing pictures (Mirzoeff, 1999; Castells, 1996). Secondly, this visual culture is a post modern culture, implying that it is in essence very fragmentized and disrupted, which adds to the fact that is a dynamic culture (Mirzoeff, 1999). It represents an endless, often real time and thus changing, stream of divergent and convergent multiple pictures with which people are confronted (Castells, 1996; Frissen, 1999). This implies that different notions of viewing and interpretation should be taken into account. Visual events are highly contingent; its interpretation depends on the specific (historical) context of the viewer (Mirzoeff, 1999). Thirdly, originally the relationship between a citizen or consumer and these pictures could be understood in terms of 'spectatorship' (with an emphasis on the look, the gaze, the glance and practices of observation). Nowadays, this relationship has become one of reading, of understanding the complex and multiple meaning of pictures that come together in the mind of citizens, thereby creating experiences (Mirzoeff, 1999). In the so-called experience economy, consumers are invited to join a open story in which they can participate, adding past of wanted future experiences (Pine & Gilmore, 1999). Pictures, very often in combination with sound, try to seduce people to be part of this unique story.

3. Policy-making and visualization

As mentioned the emergence of a visual culture affects our society as well as it does the policy-making process. In our research we will argue that the increased penetration of visual technologies in our society, and the emergence of a visual culture affect the course, the content and the outcome of processes of public policy-making. This influence will come forward when looking at public policy-making in the light of the political-institutional approach in which it is assumed that actors interact with one another in a specific institutional and cultural setting in order to come to a policy outcome. In this interaction they will interpret, distribute and frame images in a way in which they are enabled to push their values forward.
It is therefore assumed that policy-making occurs in a policy-making arena in which all relevant actors interact with one another. Since all of these actors or groups of actors might hold different values and serve different interest they can come into conflict with one another. In this conflict all actors will try to push their values and interest forward because they hope to see a lot of their values back in the eventual policy (Ostrom et al., 1994; Sabatier, 1993).

3.1 Framing

Within these conflicts and negotiations actors will use images to frame problems and solutions while hoping to place their values in these problems and solutions. The process of framing of these issues occurs when actors frame problems, solutions and results in a way others can correspond with. It is important to understand that around a certain policy problem or solution actors identify with one another within the meaning they have given to the problem or solution through the image they use. This identification with a group occurs through a process of frame alignment. Frames are the schemes of interpretation an individual holds, this is how the individual interprets the occurrences in its surroundings. Frame alignment refers to the process of getting the frames of individuals to correspond. In this way an individual can easily identify himself with a group; other members of the group have the same frame and interpret all occurrences in the same way (Snow et al., 1986). This means that in the arena actors will use images to frame their preferred solution and try to have other actors identify with this frame.
There are three core framing tasks to be distinguished (Snow et al., 1986). Firstly there is diagnostic framing, the identification of a problem and the allocation of blame or causality. Secondly there is prognostic framing, the proposal of solutions together with the strategies,

tactics and targets, and finally motivational framing, the convincing of followers that they should act. For our research the concept of frame alignment is also important.
According to Snow there are four types of frame alignment. Firstly frame bridging, the linking of two or more frames which are ideologically in each others line but are not structurally connected. Images can be used to connect these frames. Secondly frame amplification; this refers to efforts aimed at clearing up, articulating and strengthening the already existing frame. Here images can be used to have individuals identify with the existing frame. Thirdly we see frame extension; this means that an organization expands its frame to such a degree that the interest, feelings and ideas of potential followers, which priory did not feel attracted, are included. Images can be used to expand the frame so new followers can be included. Finally there is frame transformation; this refers to a situation in which the frame of an organization will provide for insufficient resonance, it will then be necessary to transform frames of potential followers into new values and meanings (Snow et al., 1986). In the process of framing of problems and solutions the image in our research will be given a central position, since it is the image which is used to frame problems and solutions by different actors in the arena.

3.2 Public Policy-Making

When looking at the policy process it becomes clear that there are several phases in the practice of public policy making which can be distinguished. Firstly there is agenda setting, this phase deals with the recognition of a problem on the side of the government. Secondly when this perceived problem is recognized by the government there might be a phase of policy formulation. This is the phase in which policy dealing with the perceived problem is designed and a policy alternative is chosen. The third phase is decision-making. In this phase the decision will be made to implement the policy alternative or to discard it. If decided so, the policy can be implemented, this accounts for the fourth phase. Finally when the policy is implemented it can be evaluated for its effectiveness and efficiency. This is the fifth phase (Howlett and Ramesh, 1995).
In the light of the above, we have argued that visuality and visual culture can have a profound impact on policy-making. However it can be argued that this impact is not evenly distributed in among the phases of policy-making. Gaining attention for a perceived problem as well as formulating policy with an alternative to solve the perceived problem can be largely influenced by images. Decision making and implementation however are not. In these cases the images which accounted for policy formulation and agenda setting have already done their job. Finally for evaluation images can be of great importance. When looking at the influence of visuality on public policy-making three phases can be identified. Firstly there is the phase of agenda-setting, secondly the stage of policy formulation, decision-making and implementation, and finally the stage of evaluation. We will look at these three phases separately below.
It must be noted that in all the phases we will look at public policy-making from the institutional-political viewpoint. This point holds that all actors operate in an arena in which they try to push their ideas forward. Additionally they are bound by their cultural and institutional setting which helps them interpret the power relations and actions within the arena.

3.2.1 Agenda-Setting

The first phase in the policy-making process we want to look at is agenda-setting. There exist a large number of different definitions of what an agenda is and of what agenda-setting is (see: Kingdon, 1984; Rogers et al., 1993; Sabatier & Jenkins-Smith, 1993; Cobb & Elder, 1972; Kosicki, 1993).

Some authors distinguish between different types of agendas like the public agenda, the policy agenda or the media agenda (Dearing & Rogers, 1996). The media agenda is the agenda in which the issues and subjects are listed which are on the agenda of the mass media. The public agenda holds all the issues and subjects on which the public is involved. These are those subjects which are spoken of in ones living room but also those issues for which the public might undertake action. Finally there is the policy agenda and this agenda holds the issues and subjects to which policy-makers devote their attention to. These different agendas can overlap but an issue that is one of the agendas in not necessarily on the other two (Dearing & Rogers, 1996). Because of the focus of this research only the policy agenda will be looked at. Agenda-setting will be defined as:

> "Media agenda-setting includes those studies that conceptualize the mass media news agenda as the main dependent variable of study. Public agenda-setting includes those studies that conceptualize the relative importance of issues to members of the public as the main dependent variable of study. Policy agenda-setting includes those studies that conceptualize the issue agenda of governmental bodies or elected officials as the main dependent variable of study." (Rogers et. al. 1993. p. 69)

What is important in the phase of agenda-setting is to look how perceived problems and preferred solutions reach political attention. How do actors in the arena gather followers and gain agenda-status for their problem or idea? We have already argued that they interact with each other in the arena and try to push their values forward (Ostrom et al., 1994; Sabatier, 1993). They will use images to frame their issue and try to gain support for their issue. The core of the research will be the influence of the image on whether they will obtain agenda-status for their issue and what the content of this issue is.
It must be noted that while some actors would want the issue to gain attention, other actors may want to prevent the issue from gaining followers and gaining agenda status (Cobb & Elder, 1972; Bachrach & Baratz, 1970). Both groups of actors can use images to make their point. The actors against the issue gaining agenda status might use images to frame the issue as incorrect or inappropriate. Those opting for the issue to gain agenda status might use images to frame the issue as pressing, urgent, important or just.

3.2.2 Policy Formulation

The next phase in the policy-making process we will deal with is policy formulation, in this stage we will also implicitly deal with decision-making and implementation. There are a large number of definitions of what policy design is (see: Howlett & Ramesh, 1995; Simon et al., 1950; Hill, 1993; March, 1994; Dror, 1968). One of these definitions need to be chosen in order to grasp what policy design is and what it entails in this research. One of the existing definitions of policy design stands out and incorporates to a large degree what in this research is considered policy design. This definition holds that

> "The proposals may originate in the agenda-setting process itself, as a problem and its solution are placed simultaneously on the government agenda, or they may be developed after the government has agreed to address a problem. […] In all cases, the range of available options needs to be considered and narrowed down to those that policy-makers can accept." (Howlett & Ramesh, 1995. p. 122)

What this definition implies is that after the agenda is set with an issue, relevant alternatives must be looked at in order to solve the perceived problem. The process of policy design thus becomes the process of defining, considering and accepting or rejecting options for political decision.
Here again it is important that the actors which are relevant to the issue will all be present in the arena. Here they will try to push their ideas so far forward that these ideas can be found back in the final policy proposal. This might cause for conflict since different actors might hold different values which they all would like to see in the final proposal (Etzioni, 1967).
Images will be used to frame the ideas of each group of actor so that their idea will seem just, right and appropriate. In the quest of actors to push their values forward they will try to gain as many followers as possible and they will try to make their ideas sound like the best solution for the perceived problem. With images they can try to do so. For example, an image can be used to frame why money should be invested in dike reinforcement. By showing a movie with scientific data representing the result of not reinforcing a dike, which could be a large flood, the issue of dike reinforcement becomes pressing. All actors will use images to back up their ideas and by these images the course, the content and the outcome of policy formulation can be influenced.

3.2.3 Policy Evaluation

The final phase of the policy-making process we will deal with is policy evaluation. There are a large number of definitions of policy evaluation and there are a large number of theories dealing with policy evaluation. (see: Howlett & Ramesh, 1995; Simon et al., 1950; Hill, 1993). The definition of policy evaluation we will use in our research is that policy evaluation is:

> the process by which the results of policies are monitored by both state and societal actors, the result of which may be re-conceptualization of policy problems and solutions." (Howlett & Ramesh, 1995. p. 11)

This definition thus holds that when policy has been implemented actors will look at this policy and judge it in terms of effectiveness and efficiency. Thy then might decide the implemented policy does not fit its goal and new policy might be necessary. Actors keep searching and adapting policy to realize their core policy beliefs. It is than assumed that new perceptions on a problem or increased knowledge of the problem can account for actors to look critically at existing policy (Jenkins-Smith & Sabatier, 1993). For experts evaluating policy the increased knowledge they might have obtained could help them change existing policy. Secondly for the public and politics images make it possible to evaluate policy and when they are not satisfied with the results they could mobilize and demand an alteration.
In the evaluation of policy images play a large part as well, those in favor of the existing policy will represent the evaluation by images which demonstrate the effectiveness of the policy. Those opposed to the existing policy might use images to frame the exact opposite. In the arena actors in this phase will use images to push their view on the effectiveness and legitimacy of the image forward and they will use images to frame their ideas. In this way the content, the course and the outcome of policy evaluation is influenced by the use of images.

4. Technology

As mentioned in the introduction, in our research on the impact of visuality in public policy-making we aim to break open the black box of technology and not regard it as given. In this section first we will deal with how technologies used to visualize will be looked at. Secondly we will very briefly look at some technologies which produce and distribute images.

4.1 Technology as a Social Construct

There are a number of ways to look at technology, these come forward in the technology debate. The technology debate deals with technology and humans, technology and society and technology itself. It reflects on questions of who drives technology, are humans the drivers of technology, or does technology drive humans. Does technology possess any values in itself, are these values given to technology by humans or does technology have no values whatsoever and is it completely neutral. Also the way technology affects society comes into play. In our research we will adapt a social constructivist approach on technology. Within this approach outcomes of technology are not inevitable and consequences are not fixed. Technology as well as society is seen as social constructs in this approach. A few concepts are important. First the idea of relevant social groups, these are the groups which design, use, implement or experience consequences of technology. These groups carry the process of technological development. These groups give meaning to technology, the focus is on the way these groups perceive the technology. Next the concept of interpretive flexibility, this holds that each group can attribute different meanings to a technology, the idea is that by giving meaning to the technology the group constitutes the technology. It must be noted that not all groups attribute the same meaning to the same technology, this is where stabilization and closure come in. This means that when a technology is accepted in society for a while the relevant social groups start, slowly, to agree on the meaning of the technology. The idea of meaning within different relevant social groups starts to stabilize, consensus between the groups on the meaning of the technology is then achieved. Mostly this means that the meaning given to technology by one group becomes dominant. The process of the social construction of the technology is then finished (Bijker, 1995). It is clear then that within this approach technology does not have a life of its own and that everything depends on the process of social construction. The values technology are attributed with are thus given to it by this process. Technology and the usage of it is thus shaped by humans through this process.
Especially when looking at images, this approach can be very useful to our research. It is important to know there are different views on representation. In our research we will not regard images as a representation of the world, they do not reflect the world as it is. However, we construct the world and its meaning through the system of representation we use (Sturken & Cartwright, 2001). Images do not have any value on their own, they are used and interpreted in their own societal and political context. As we have mentioned in the section on policy-making, different actors in the arena use images to push their values forward, issues are therefore used and created for framing issues, not as a reflection of the world. Each actor will use images in a different way to support his own values and to portrait the world in his own interpretation.
Therefore a social constructivist viewpoint will help us understand the dynamics between society and technology in the field of public policy-making. It will take into account that reality is constructed by the frames actors hold but is also dependent on the environment the actors operate in.

4.2 Technologies for the Visual

There exist a large number of different technologies to create and distribute images. In the relation between politics and the public these are mostly defined as mass media. Mass media can be defined as a form of media that aims for and is designed to reach a very large audience, like a nation wide or world wide audience. Typical for mass media is that they are, as said designed to reach a very large group of people. It is not aimed at point-to-point media like telephony or person-to-person like speeches. Examples of mass-media are broadcasting, newspapers, books

and magazines and the radio and the Internet. In the mass media literature a distinction is being made between 'old' and 'new' mass media'. Old media are characterized by the fact that they are analog, something is recorded and simultaneously processed where new media is characterized by a binary code that is not simultaneously processed. Put differently, new media is made by computers and old media is not, although this more classical distinction seems to be blurred in recent times. Another difference is that new media tends to be more interactive and often deals with user-generated content, meaning that the user of the media for a large part can influence the content of the media.

In the creation and distribution of images mass media play interesting role. The claim that the media represent knowledge and that (the distribution of) knowledge is a source of power used to achieve specific goals is relatively limited and crude (Street, 2001). This argument fails to recognize the idea that reality is constructed. The concept of reality construction is based on the assumption that the way people act is conditioned by what they think and the frames they use, and that what is thought is affected by the image of the world conveyed by the mass media. Media help individuals to pick up particular versions of reality often by using images. They help to construct people's identities and interests, and hence their relationship with reality. The power of the media is therefore primarily perceived as discursive with regard to its potential to create specific frames and create the alignment between frames. The adoption of these frames however, is also dependent on the resources and skills that people possess, as well as on their culture, educational background, and the practices in which they are involved (McCombs & Shaw 2007; Newton, 1999).

Second, the power of the media can also be viewed in terms of access power (Street, 2001). Access power refers to the way in which mass media control the range of voices or interests, thereby using various formats and media. The kind of media that is used creates specific barriers to actors who want to advance their ideas and frames, thereby influencing the likelihood that these ideas will gain access to a larger public. Third, media power can also be defined as resource power (Street, 2001). Resource power refers to the way in which media organizations can affect the actions of government and states in terms of their economic and bargaining power in relation to government, politicians, political parties, companies, and other organizations. For example, governments need media conglomerates for the infrastructural services they provide (in order to ensure the provision and circulation of information) and for the income and employment they generate.

This brings us to the communication from the public to politics. Since the public often has no access power to traditional or old mass media they can use new media to create and distribute images. Especially the internet and web technologies play an important role in this research and the developments that take place in this domain**.** The interactivity possible on the Internet is often referred to as web 2.0. Web 2.0 can be defined as a metaphor that refers not only to a new set of technologies but more specific to another kind of internet and web use. Web 2.0 has also been called the 'social web', because in contrast to web 1.0 its content can be more easily generated by users as well as the collective intelligence of users (Boulos & Wheelert, 2007). Users are not the passive consumers of content (in terms of information and communication) but they should be seen as co-producers and co-creators. This can be seen in the light of visuality. Pictures, images, sounds have become increasingly important as manifestations of relevant content. Technologies like MMS, YouTube and Flicker allow users to upload images for others to see.

Finally there is the communication of images from experts to politics. Experts in a certain policy field often use advanced technologies to produce and show their data in the form of an image. The technologies used for this are mostly called applications for information visualization. This can include virtual worlds but in the cases of simulation also serious gaming. Often complex information systems which link different data together are used so large data sets can be combined and demonstrated to politics. These images might at first glance seem to be more

objective than the technologies demonstrated above, because they are clearly politically motivated, but our research will show that experts can use images as well to push their ideas forward. It is important to note for example that the end user is not able to see how the raw data came into the visualization, additionally the user might not be aware how to interpret the image given to him (Chen, 2005).

In our research the black box of technology will not be seen as given but will be broken open to see what is inside. For each technology for visualization which is used in case studies it will be analyzed what the possibilities of these technologies are but also what the limits could be. The technological frame all actors hold is important here. The technological frame is the interpretive scheme actors have to give meaning to their social reality. The technological frame holds the assumptions, expectations and knowledge about the purpose, context, importance and role of technology by a certain group of actors, this shapes the technology. Each actor or group of has a different technological frame (Orlikowski, 1992; Orlikowski and Gash, 1994; Bijker, 1995; Berger and Luckmann, 1967; Weick, 2001; Searle, 1995). The way they perceive the technology will account for the way they use it to distribute, create and view images. However, the technology itself has its limits, this can be found in the design of the technology which can influence the actors in its turn again (Orlikowski, 1992). The designer himself made decisions on which functionalities a technology should hold and which should not be included (Winner, 1979). The interplay between the functionalities inherent to the technology and the technological frame of the actors will than account for the relation between the two.

5. Towards a conceptual framework

After explaining what visual culture entails, what the policy process includes and how we will be looking at technology it is important to look at visuality in policy-making in a systematic way. We will do so by using a conceptual framework along which lines case studies will be evaluated.
The conceptual framework will look as follows:

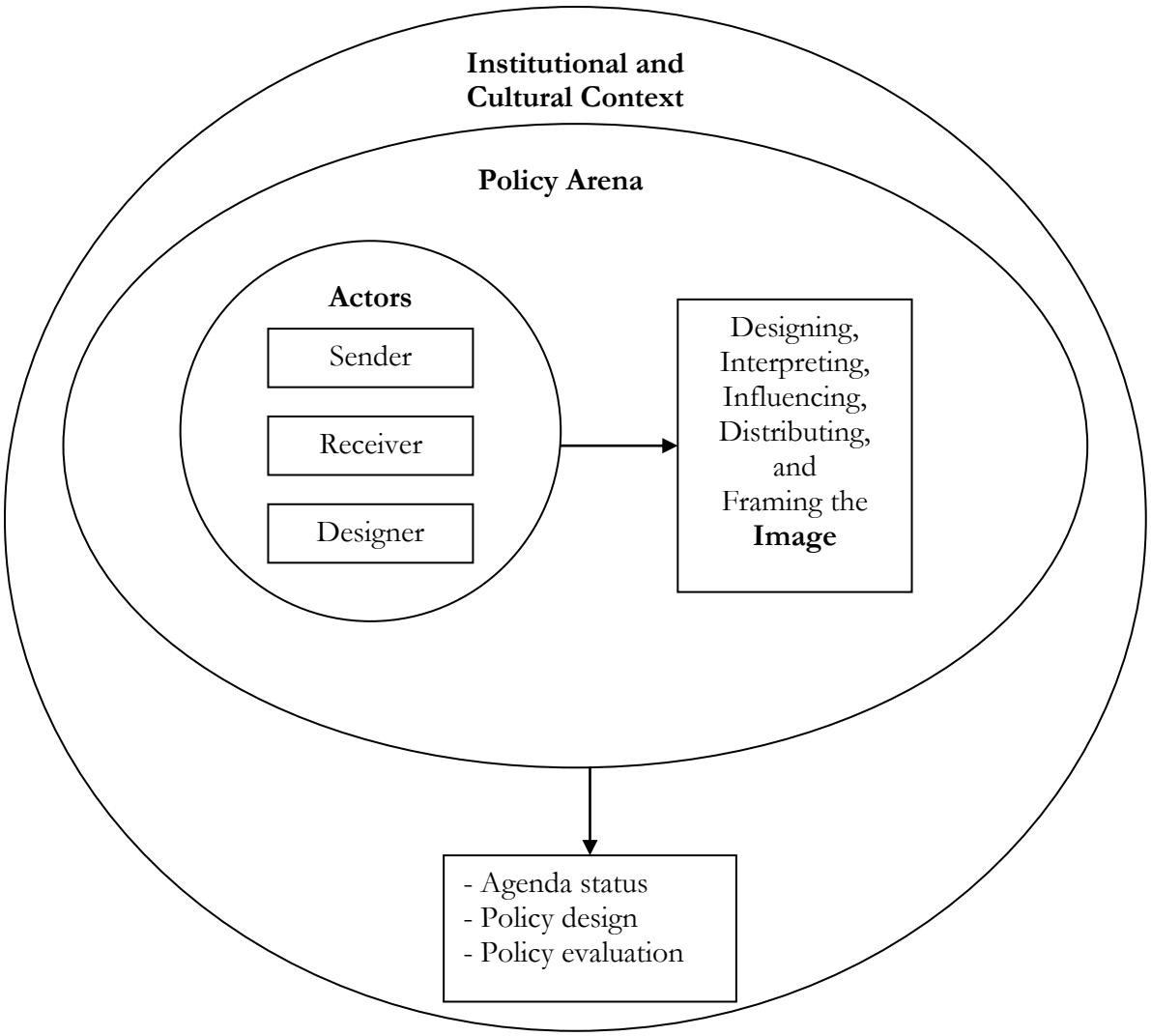

Figure 1: A Conceptual Framework of Visuality in Public Policy-Making.

All actors, regardless of the phase within the policy process operate within an arena (Ostrom et al., 1994). This is the social space in which actors interact with each other. This social space is context related. Informal and formal rules, culture, the national mood as well as other contextual and institutional factors limit or enhance the actions possible in this arena.
Within this arena three groups of actors interact with each other. First of all there is the designer of the technology. The designer of the technology has designed the technology and included some functionalities and excluded other functionalities. The frame the designer holds on this technology is important. This frame accounts for the way the designer believes the technology can and should be used for. For images this means that the designer for a large part decides on the scope of how images can be designed, viewed and distributed while using this specific technology.
A second actor is the sender of the image. The sender sends the image within its own frame. This means that the frame the sender holds is not necessarily the same frame as the receiver of the image holds. The sender can choose between different technologies to send his preferred image. There are two ways the sender can do so which link to relation of the sender to the designer of the technology. First of all the sender can use an existing technology, like YouTube or the eight

o'clock news. This gives the sender the advantage of prior knowledge on who will most likely receive the image. A disadvantage of this for the sender is that the sender is bound to the limits of this technology, for example, interactivity is very difficult when broadcasting the image on the eight o'clock television news. Another way for the sender to send his preferred image is to have the technology newly designed. The advantage of this is that it enables the sender to include all the functionalities within the technology he sees fit for his image. A disadvantage is that the sender has no prior knowledge on who will receive the image or whether the receiver will be able to work with the technology.
Furthermore it depends on who the sender is which technology he will use. As discussed there is the point of access power. Not all possible senders have access to all possible technologies. A citizen has less chance of broadcasting his image on television than a political party. In terms of costs of technology it is often very difficult for citizens to have a new technology designed for them. It must be noted that while more than one actor would want to send an image on an issue that it is not necessarily so that there is only one sender.
Thirdly there is the receiver of the image. The receiver holds its own frame on the image, this means that the receiver might regard the image very different than the sender. The meaning of the image might partially be crated when and by whom the image is consumed (Sturken & Cartwright 2001). It is firstly important to look at who receives the image, the intended receiver might not actually receive the message but another group might. Secondly the receiver might not receive the message through the intended technology since the image might be taken over by another medium in the process of sending. For example, television news might broadcast a YouTube image. The receiver will communicate back to the sender and this can account for the sender to reframe the issue and resend it.
Furthermore the receiver is dependent on the technology; this is the relation between receiver and designer. Not all people are able to receive the image or they might not access the medium out of personal preferences. Additionally they might not be aware on how to operate the technology. It is also possible that a receiver uses the technology in a different way than the designer intended; this can then be communicated back to the designer who might adapt the technology.
It must be noted here that our research will go further than the classic sender-receiver theory in which the sender sends a message which will be received by the receiver. In our research both sender and receiver are not fixed and the receiver might not be the intended receiver. Furthermore all actors, sender, designer and receiver create the meaning of the image in their interaction.

The influence of visuality on policy then becomes the result of the interplay between the three actors, the designer, the sender and the receiver. They will all try to push their values forward and will create images, view images and interpret the images in a way which fits their frame. The will try to find as much followers as possible. The result of this process of creating, interpreting, influencing, distributing and framing of the image will be respectively agenda status, a policy design or a policy evaluation. This all happens within a specific context and with the legal rules, formal institutions, informal rules, culture and national mood.. Therefore the meaning the image will have for policy-making is a product of complex social interactions among the image, the viewers and the content (Sturken & Cartwright 2001).

6. Research strategy

When looking at the goal of this research it has become clear that this research aims to provide for an understanding of what the influence of the visual is on the content, the course and the

outcome of public policy-making. While this research holds an explorative character there is not one best way to research this.
There exist a large number of research strategies which can all be very useful depending on the goal and the epistemological position of the research (Yin, 2003; Babbie, 2001; Seale, 1998; Silverman, 1993). In this research the choice is made to combine several strategies, this is called methodological triangulation (Yin, 2003; Babbie, 2001). This method involves that the strengths of several theories can be combined neutralizing each others weaknesses. By using multiple sources of evidence the construct validity of the research can be improved since operational measures for concepts can be found in more than one way (Yin, 2003).
This combination of different methods will consist of firstly examining existing material. A lot of material exist on technologies for creating and distributing images, on virtual culture and on the effects of the media.
A second method which will be used is case study research; A number of case studies will be looked at. This can make sure that empirical evidence can be directly found and observed. The material can be looked more intensively and more directly. Within the case studies the material that will be obtained is three fold. Firstly written information will be looked at; these can be legal documents, government reports, policy documents and news publications relevant to the sector and the application itself. Secondly semi-structured interviews will be conducted with stakeholders in order to make sure their perception of issues and other actors can be researched. The choice for semi-structured interviews is based on the idea that perceptions, nuances and intentions of actors can be better researched, and more in-depth, by interviews than by surveys (Yin, 2003). A qualitative approach is necessary in this research since the frames which have to be distinguished can be found through interviews. A quantitative approach would suggest pre-determined variables making up for the frames. These are at this moment unavailable and unresearched. Therefore a qualitative approach fits the research best.
Finally some observation will be done. Interaction between actors will be looked at. This will be done to get a better understanding of the features of the application as well as to obtain knowledge about the relations within the sector.
For the case studies a case study protocol will be made to ensure a systematic and coherent way of conducting each case. In the end this will give us the possibility to compare the case studies.

When looking at the case studies it can be argued that multiple cases make comparison possible and therefore can account for a higher degree of reliability of the results of the research. This is so since by a multiple case study the models of agenda-setting and policy design are replicated in each case (Babbie, 2001; Yin, 2003). Furthermore a multiple case study approach can increase the external validity of the research since by conducting more than one case study findings can be generalized (Yin, 2003). The explorative character of this research makes the choice for multiple case studies justifiable. A very intensive research will be conducted on a relatively unknown phenomenon. This accounts for the opportunity to research a large number of variables at the same time, instead of a small number of variables with a lot of respondents (Yin, 2003).
The selection of case studies will be on the basis of two variables. Firstly it will be based on the sender and the receiver of the message. As was clear there are three groups of actors to be distinguished between: politics, the public and experts in a policy field. In order to account for a proper overview on the influence of images on public policy case studies will be selected on the basis of this. In theory all three groups can communicate images among them. In practice this is not the case. Experts mostly communicate to the public and to politics. Policy makers mostly communicate to the public and the public communicates among themselves and to policy makers. For each line of communication case studies will be done. By selecting the case studies by this criterion we will guarantee a variation in the technologies used. This will make sure an overview can be given.

The second selection criterion deals with the stage in the policy cycle. As explained we will distinguish between three phases, agenda-setting, policy formulation and policy evaluation. The case studies which will be conducted will be distributed among these phases.
Below in the table it is demonstrated how the case studies will be conducted.

	Agenda-Setting	Policy Formulation	Policy Evaluation
Experts to Policy-makers + Public	Experts use visual images in order to mobilize policy-makers and the public to gain attention for their issue	Experts use visual images in order to push their policy idea forward	Experts use visual images in order to argue whether existing policy demonstrated their preferred results
Policy-makers to public	Policy-makers use visual images in order to mobilize the public to gain attention for their issue	Policy-makers use visual images in order to push their policy idea forward	Policy-makers use visual images in order to argue whether existing policy demonstrated their preferred results
Public to policy-makers + public	Public use visual images to mobilize policy makers and the public to gain attention for their issue	Public use visual images in order to push their policy idea forward	Public use visual images in order to argue whether existing policy demonstrated their preferred results

Table 1: Classification of Case Studies

Each case will be looked at in terms of the technology itself, its limits, possibilities and functions. Secondly the frames of the designer, the sender and the receiver are looked at and finally the impact of the image will be looked at as a result of the interaction between the three actors and the technology within its cultural and institutional context.

7. Results

Deliverables are:

- A research report of the entire research in the form of a monograph
- 3 articles in international refereed journals
- 3 conference papers like EGPA, DEXA and ECPR conference
- A website with interactive features on the research

The proposed research will be conducted in two years. In these two years Rebecca Moody will function as a full-time researcher on the proposed topic, i.e. five days per week, and Victor

Bekkers will research the topic part-time, for one day per week. A time planning is made below to structure the research over the next two years.

Date	Action
January 2010 – April 2010	Development of a theoretical framework
April 2010 – June 2010	Operationalization of the framework and case study selection Development of the website
June 2010 – April 2011	Conducting of the case studies First presentation of findings at a conference Submitting a first article
April 2011- July 2011	Analysis of the case studies and comparison Second presentation of the findings at a conference
Juli 2011 – December 2011	Writing of the research reports Submitting of the articles Presentation of the general conclusions at a conference

Table 2: Time planning for the research

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