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Political rationality and CCS discourse

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Abstract

In 2007, the Norwegian prime minister's made the promise that a 'moon-strike' was due at Mongstad Refining in 2014, involving full-scale cleaning of CO₂. This was the prelude to a long and heated debate on CCS in Norwegian media. Extensive technological innovation is needed to fulfill the promise, but as shown in this paper, the ongoing debates are not about CO₂ cleaning technology, but rather about political promises and emotions. Through a discourse analysis we have identified two main public discourses related to the announced lunar landing, including important participants and arguments, as well as the positions focused. The paper outlines the underlying structures of the public debate about CCS, which in turn are structured by the very same debate.

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Media discourse; CCS; Media access; Power;

1. Introduction

A successful innovation process within the field of Carbon Capture and Storage (CCS) - that is the process towards a future where CCS technology not only is possible, but is in use as an important part of everyday industrial processes – is dependent on (1) scientific achievement, (2) industrial involvement and (3) public funding. This paper focuses on the political dependency upon legitimation of current themes through public discourse, as basis for opinion formation, and, implicitly, also for political support.

Previous analyses of climate and energy related discussions have mapped discourses e.g. on policy making and global environmental issues [A]. Other studies of interest are concerned with and emphasizes the mass media's role as 'meaning-makers' in both environmental [B] and climate [C, D] issues. Another topic of relevance to this study is the contrasts between scientific and media presentations, which indicate that there are many concerns other than scientific facts that determine the framing of public debates [E,

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F]; leading to discussions about a ‘knowledge-ignorance paradox’ [G]; ‘the process by which the growth of specialized knowledge results in a simultaneous increase in ignorance’ [H p297].

By mapping and analyzing Norwegian media texts on CCS in five different dailies and a periodical, we have identified ongoing media discourses on CCS, and on CO₂ cleaning in particular, as basis for a discussion about their potential influence on CCS innovation processes. In the present study, the concept of ‘discourse’ is used to denote the mapping of predominant ideas, or frames of reference, potentially decisive for how people; including politicians, authorities, and experts, relate to different issues connected to climate changes and the questions about renewable energy technology.

In the process of mapping CCS media discourses, four structural conditions seen of importance in understanding discourse formation have been emphasized:

- Predominant arguments – within each discourse, which types of arguments, are accepted as valid?
- Access – whose voices are accepted as legitimate in Norwegian CCS discourses?
- Media narrative – how are topics framed within the CCS discourses?
- Critical events – which kind of events form the storyline of the CCS discourses?

We have identified two main discourses. An important finding is that present discourses on CCS in Norwegian media are characterized by emotional argumentation, rather than by discussions about technological needs. We have identified who can and does participate within the two media discourses, and how this is related to the designated roles they hold within a specific media narrative. Such narratives are carried forward by critical events of governmental political actions, which in turn trigger reactions.

The paper is structured as follows: Section 1 introduces the paper's main arguments and structure, section 2 presents the research methods; section 3 focus on discourse and political rationality; section 4 presents the CCS media discourse formation and structure, section 5 the main arguments about CCS in Norwegian media; and conclusions are presented in section 5.

2. The Norwegian lunar landing initiative

In his New Year's Speech 2006/07, the present Prime Minister stated that complete cleaning of CO₂ from Mongstad Refining within 2014 was the Norwegian lunar landing. Simplified, one can argue that this statement created a new space in the Norwegian media sphere, in which thousands of articles have been published since then. The proposition of a lunar landing was perceived as a promise, which has since been broken by the same Government, as the date for the actual moon strike continue to be postponed.

The words “this is our moon landing” were not uttered in vacuum, and their impact on the Norwegian media must be understood in the political context they were spoken. First and foremost, the proposition could be made based on results of long-term research, originally initiated in cooperation between the Norwegian research institute SINTEF and the petroleum company Statoil in 1986. The need for such a grand gesture had also grown from the political landscape and recent political media history. In 2000, a political debate about Norwegian gasworks resulted in a change of government, paving the way for the Labor Party, who fronted CO₂ cleaning as one of their main political messages. In 2005, the Labor Party was again in reign, heading a coalition Government including three parties. This government stated that a gas work at Kårstø would be initiated, provided that a full scale cleaning facility was ready in 2009. Furthermore, it was underlined that no new gasworks would be built without cleaning facilities. In 2006 the government then agreed to let Statoil to build gasworks at Mongstad, on condition that a full scale cleaning facility would be ready in 2014.

Figure 1 shows the events referred in most Norwegian newspaper articles about CCS as the backdrop for the lunar landing proposition, and which, seen together, form a meaningful storyline. Perceived like

this, as a storyline within a media discourse, these are not just discrete events, but could rather be seen as core social realities shared by a storyteller and an audience. As an example of this view, Trumbo and Shanahan emphasize that ‘narratives told by the mass media, which some argue have emerged as modern society’s primary storytellers, [have] in many ways replaced society’s earlier dependencies on direct information and oral traditions [G p.201].

The critical events [15] that form the timeline, or rather the storyline, of the moon landing discourse, include events occurring previous to the moon landing proposition. Yet, in the narrative these event are related, as they lead towards and facilitate the launching of the political lunar landing promise. Whenever the story is presented in so-called fact-boxes, whenever actors refer to events in a matter-of-fact way, these are events that can be, and usually are, included in the articles.

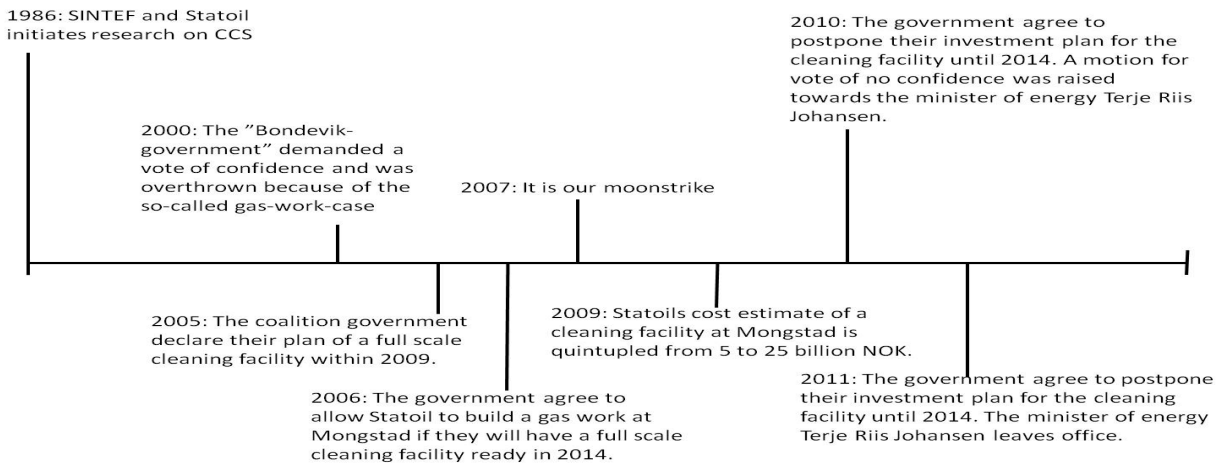


Figure 1 The storyline of CCS in the media

2.1. Funding and re-election

The predominant CCS discourses in Norwegian newspapers are related to the ambitious targets of the Climate Agreement. This agreement was supported by the majority of political parties represented at the Norwegian Parliament, and implies a need not only for extensive research, but also for turning the research results into widespread practices. A part of this discursive landscape is the political rationality emphasizing reelection as paramount for governing parties. Accordingly, priority-settings are based on themes made legitimate by the public opinion. As illustrated in figure 2, we suggest that media discourses form the most important premise for political decision-making [3,4], and for public funding of CCS-initiatives, although scientific results and industrial processes are equally important for succeeding with CCS technology development and implementation.

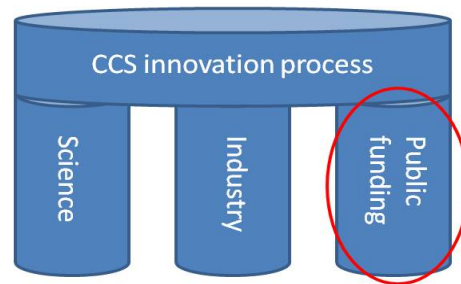


Figure 2 Public funding and the CCS innovation process

produces the objects of our knowledge, and governs the way that a topic can be meaningfully talked about and reasoned about [11].

The power of a discourse, in Weedon's [1] interpretation of Foucault, is the “dynamic of control and lack of control between discourses and the subjects, constituted by discourses, who are their agents. Power is exercised within discourses in the ways in which they constitute and govern individual subjects“ (p.113). Media discourses, specifically related to *news production*, is therefore described as one of asymmetrical dependency by e.g. Carrol & Ratner [8] as actors must adapt to media discourses in order to be granted;

1/ standing - i.e., a quantity of coverage that places [the topic] clearly in the public gaze, 2/ preferred framing of the issues at hand - i.e., a construction of the news that features the terms, definitions and codes of the movement, and 3/ sympathy - i.e., coverage which is likely to gain sympathy from relevant publics. (p.3)

All articles on CCS have specific structures, narratives, and actors, which define what is and can be discussed within this specifically structured public space that we call a discourse. The discursive power is the creation of this space that is believed to reflect and shape the public. The power of a media discourse is a non-personal structural power which determines what the news is about, how the news can be framed, and who can tell the story. Pierce [12] describes discourse as a “mode of communication” that may be described as a debate, conversation, monologue, or text. The discourse analysis would then be an analysis focusing on the choice of words, and how this choice is adapted to (and influenced by) a certain context. Seen this way, the wording will represent a way of thinking, speaking, or acting. Similarly, Hågvær [13] states that a discourse represents a way of thinking, a pattern, or a relation as basis for interpretation of the world. A media discourse can therefore be understood as the structure that structures a topic according to 1) which topic that can be discussed, 2) how a topic can be discussed, and 3) who which can participate in discussions about the topic.

3.2. Data collection and analysis

In mapping Norwegian CCS media discourses, the participants within each discourse, and their respective arguments, we have sought to identify the predominant ideas being communicated, and apparently accepted, within the different media discourses. Data were collected from two sets of articles, found in five Norwegian newspapers and a weekly technical journal, stored in the database “A-tekst”. The sources were “Adresseavisen”, “Aftenposten”, “Dagens Næringsliv”, “Klassekampen”, “VG” and “Teknisk Ukeblad”. These papers cover a broad range of discussions on CCS in Norway.

Initially, we searched the articles using multiple search criteria and keywords. We reviewed and looked for patterns of relevance in about 500 articles. This resulted in two sets of data. The articles constituting the first set were picked out when searching for the term ‘CCS’ in the period of 2007-2011; a total of 116 articles. The second set of articles was selected based on the search for the term ‘CO₂-cleaning’ in the period of 2009-2011; a total of 584 articles.

All articles were analyzed based on the following questions: What is this about, what is discussed, who are the discussants, and what is taken for granted in this line of argument? As a result of this preliminary review, patterns were found representing what appeared to be generally accepted truths, including themes and narratives shared by most actors. These patterns formed the basis for the framing of a main discourse, as well as a counter-discourse. Within these two main discursive areas, sub-discourses could be identified. After having identified the main discourses, key actors, and significant positions, the articles were coded accordingly. The articles were with a total of 14 variables; background variables such as topic, newspaper, date/year, and size; and articles themes, actors, and sources (primary source, secondary source and tertiary source. The two main discourses and the associated sub discourses were ranged according to

these variables. Finally, the media genre and the position adopted in the articles (positive, negative – implied or explicit – or neutral towards the discourse) were determined.

4. Results and discussion: CCS discourse formation and structuration

Events exist in media if they are *significant, identifiable*, are a *sensation, current*, or include a *conflict* [10]. If all of these criteria are fulfilled, events tend to come out as a headline. If only some are fulfilled, events are more likely to be profiled as a notice. We find that events included in the Norwegian CCS discourse are significant and identifiable when they are connected to the Government's promise about a moon landing. If this promise is perceived to be broken or changed in some way by actors involved in the ongoing discourse, this can be seen to constitute a another critical media event which legitimizes new alliances between organizations, new prioritizations, and above all new articles related to the critical event.

We find that the biggest headlines are related to the expectation of a lunar landing, and in particular to the perception of a breach of promise. Furthermore, we observe that the importance of current events seems to be reflected in the number of articles following a certain headline. Yet another observation is that new arguments related to the promise of a lunar landing opens the scene for more actors. In the wake of events, which can be seen as 'critical' (such as the postponement of an investment plan), the emergence of new alliances and conflicts can be seen. Changes in public alliances are legitimated by the critical events, and therefore, such events are treated as causes; which, for example, lead to the making or breaking of alliances. In the media it is presented that the 'critical events' cause lesser events such as a change of public alliances, thus ensuring a continued debate by the same actors.

The access to discourses is controlled by the media, and legitimized by the discourse. Interested parties struggle for access in order to define and mark the ongoing public discourses, and within each discourse the interested parties will have (or not have) access to particular positions in the narrative structures. We find that two main ways of gaining access to the media discourse can be identified; one is as an actor, the other is as a source to information. If someone have written/produced the article him/herself; or if someone else has written the article solely from that point of view, that one was registered as the actor of the article. If an argument of an article was based on or discussing others points of views, these where registered as sources differentiated by how much importance the source was given by the actor. Both these categories are ways of gaining access to a media discourse, with different degrees of both control and influence.

We identified three events that in particular provoked large numbers of articles concerning CCS. These events were 1) Statoil's cost estimate of a cleaning facility at Mongstad, which quintupled from 5 to 25 billion NOK in 2009; 2) the government agreement in 2010 to postpone their investment plan for the cleaning facility until 2014, which resulted in a motion for vote of no confidence in the then minister of energy, and finally; 3) the government agreement in 2011 to further postpone their investment plan for the cleaning facility until 2016, which led to the replacement of the minister of energy.

A preliminary analysis on the relationship between energy, climate and CCS in selected Norwegian newspaper articles over the past four years showed that two main discourses can be identified. We refer to those as the 'The Moon Landing' and 'Wrong focus' discourses. Figure 5 shows the main arguments of the CCS discourses. The CCS research initiative, the political backdrop, and the proposition of a lunar landing gave force to the debate to come; creating a structured media space where some actors, but not all, could engage in the exchanges of views on CO₂ cleaning and associated topics. The two main discourses identified will be described in more detail in the following sections.

4.1. Main arguments about CCS

The defining event that has formed the Norwegian CCS discourse was the Prime Ministers proposition of a moon landing; which was perceived as an important promise related to the disturbing signs of climate changes. As previously illustrated in figure 1, the events discussed in the articles included in the present study, are all closely related to that promise. One particular approach to register the effects of the lunar landing promise on the public debate is to count the number of articles produced subsequent to the Prime Ministers new years’ speech in 2007. A search on “A-text” show that the year before, in 2006, only 8 articles in Norwegian newspapers included the term CCS, whereas in 2009 there was 147 articles. The same pattern was found when we searched for other terms, such as “CO2-cleaning” or “Mongstad”, A search for “lunar landing” (resulting in 11 hits in 2006, and 141 in 2007) further reveals a change of focus of the ongoing debates towards a bisected picture where the debaters all relate to the “lunar landing” metaphor, and basically discussing whether or not this is the best way of solving future needs for climate-friendly energy.

As illustrated in figure 5; the 1986 research initiative paved way for the promise about CO2-cleaning, the political landscape gave force to the words “this is our moon landing”; and the last four years, the news has been characterized by debates and responses related to that proposition. One way of categorizing the ongoing debates, is by which actors who are affected by the promised moon landing:

1) politicians – a promise is made to the public, 2) the green movement – a promise is made to ‘the environment’, and 3) technologists/researchers – who discuss the lunar landing as a promise about new fields of research, and a new industry. Within the ongoing debate, the majority of the debaters is positive about a ‘Moon landing’; yet discusses intensely whether the government actually keeps its promise, or not.

A second sub discourse, involving somewhat fewer actors, is related to the need to capture CO2. As in the sub discourse focusing on the ‘lunar landing’ most of these articles are supportive of the idea of CO2-capture; disagreements are about whether the promise to realize this will, or can, be kept.

A third sub discourse, being far the least dominating, is related to which fields of research and development should be prioritized. These articles mostly appear in specialized magazines; focusing on the possible effect of the governments politics on the areas of interest for those magazines.

There are voices that challenge the predominant media debates on CCS. Apparently, these actors try to establish other structures in the media, enabling them to discuss different, but related, topics, within other frames, and by different actors. These voices form a ‘counter discourse’, which by its nature is defined by the main discourse. Thus, the texts that are produced and published follow the very structure that is challenged. We have named the counter discourse ‘Wrong focus’ as the arguments presented essentially challenge the very focus on the moon landing; both in the media and by politicians. Debaters within the counter discourse assert that political priorities should be within other fields of renewable energy. This is justified by arguments emphasizing other environmental issues as more problematic than CO2.

The predominant topic within ‘Wrong focus’ is that a lunar landing at Mongstad overshadows other, as important, ways of reducing climate strains. This is partly based on a view that it is more expensive and less effective to develop CCS-technology for Mongstad than it would be in new gasworks in Norway, or

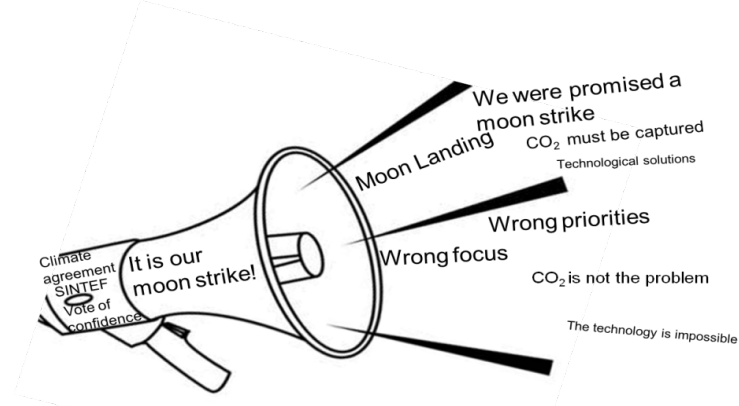


Figure 3 Critical events and discourses related to the lunar landing promise

outside of Norway. The sub discourses of ‘Wrong focus’ are about 1) The promise of a moon landing being a wrong priority, 2) other environmental issues being more important, and 3) the improbability of being able to realize the necessary CCS technologies.

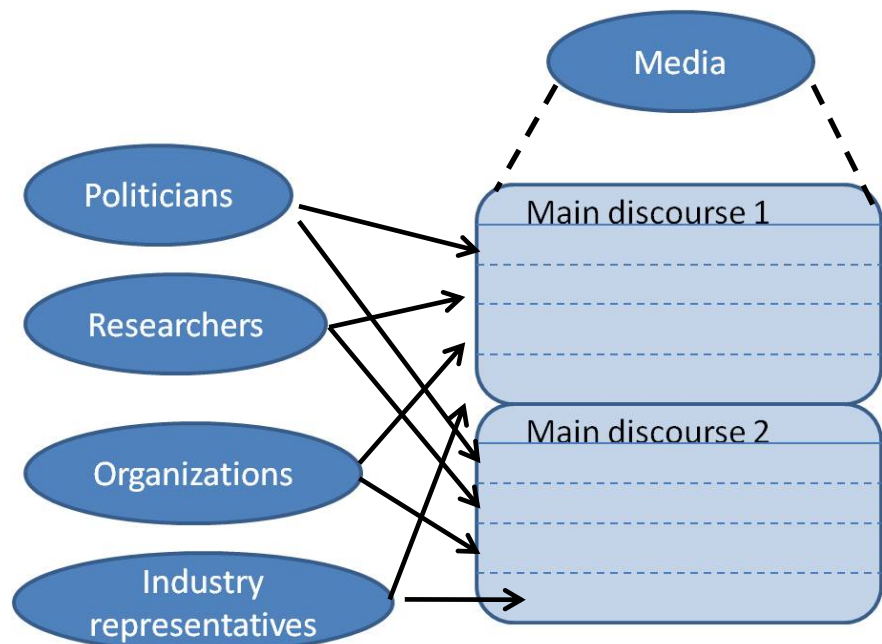
As can be seen, the discussions about CCS include a myriad of arguments. Our results show only indications about important factors such as which actors who argue in support of each other, and how different journals frame topics differently. However, the predominant finding is that all articles in some way or other revolve around the promise of a lunar landing, discussing whether or not the promise should have been made in the first place, and whether or not it is or should have been broken, kept, or changed. The ‘Moon landing’ discourse and its counter discourse ‘Wrong focus’ are both defined by a specific political proposition about CO₂-cleaning, and at the time being, new events appear not to be seen as significant within the ongoing discourses on CCS unless they are related to the lunar landing promise.

4.2. Access to the discourse

Actors submit to discursive power structures in order to gain access to the debate, and the processes of legitimation. This is illustrated in figure 3, which show that the media frames the discourses, and thus defines whose voices who are allowed access to the debate. The actors and sources gained access to the media discourse on CCS is categorized as:

as:

- The authorities
- The political opposition
- Environmental organizations
- Researchers and experts
- Industrial representatives
- Media
 - Political commentators
 - Editorial



The media and the authorities have an almost exclusive position in the CCS discourse as text producers; and the media dominates the picture when these two categories are compared. The other categories of actors are present mostly by being referred to as sources. The authorities dominate the picture

also as a source; often as a main source to the article thus forms the basis of the topic discussed through the other sources of the article. Environmental groups and oppositional politicians are the categories that are most used as a source after the authorities; used as voices that comment the actions of the authorities. Lastly “researchers and experts” together with “industrial representatives” are used as sources, often as tertiary sources giving a view that comment on the first and second sources.

The degree of access is related to whether an actor is used as a primary, secondary or tertiary source. This has to do with the structure of the media discourse on CCS, both in terms of *who* are defined to be relevant sources, *under which conditions* actors are allowed access, and *how* sources can be used to

legitimate an argument within a given topic. Actors’ access to discourses and their actual influence on the discourses are both determined by what we can call ‘the media narrative of CCS’.

4.3. Media narratives

Media texts are told and understood as narratives. Events and characters are structured in specific ways which gives meaning to facts and arguments. Actors are allowed access to ongoing media discourse if they, in some way, can fill a position in the narrative, either as the narrator or as a character of the underlying story. Sometimes individuals can speak for themselves (see e.g. Spivak [14] for discussions on discourse and agency), mostly through chronicles or letters to the editor; but still they need to angle their arguments from a certain point of view.

When government representatives get access to the discourses, either in person or indirectly, being referred to by others, they comment on the political proposition about CO₂-cleaning; either by explaining how that promise will be kept, is changed or – interpreted by others – has been broken. Other actors gain access by *how they are affected* by the political promise, and the following actions, or lack of action. We find that the responses given are strongly marked by *emotion*. Actors, such as environmental organizations, the political opposition and industrial representatives, are typically quoted; or sometimes themselves argue, to be ‘hurt’, ‘disappointed’, ‘content’, ‘agitated’, or having other emotional reactions caused by governmental promise-keeping, -changing, or -breaking.

The rationale that legitimates that someone’s emotional responses are sufficiently important to be profiled in the media, is that they are emotional *on behalf of someone or something else*. As an example, environmental groups are emotional on behalf of the environment or the climate, oppositional parties on behalf of the people, and industrial representatives on behalf of the economy or technology.

Another interesting finding is that, apparently, R&D on CCS is a ‘black box’ in the main media discourses; that is, funding of research is nothing but an effect, caused by the government and believed to affect the climate, the public or e.g. the economy. Simplified, the media narrative holds that the government is the responsible actor, whether giving promises, breaking promises, or taking action. Within this picture, R&D tend to be presented as an action *which is causing something*, and the effect of that cause is found either in the environment, the public or a field such as technology or the economy. Finally the effect is emotional; and the ones that can express those emotions represent either the climate, public or another technology/economy.

As it is the promise and the metaphor of a moon landing that is the core element of what is significant within the media discourse on CCS, we named the main discourse Moon Landing. In addition we found many voices that argued against such a big focus or this specific kind of focus on CCS in the media; a counter discourse in which we have called Wrong Focus. Both discourses include sub-discourses where actors share more specific premises and terms of discussion.

5. Concluding remarks

Discourses change over time, and by identifying changes in the discourses applied in media debates, changes in the public attitude toward climate issues as well as changes in politically legitimate choices can also be recognized. ‘The moon landing’ is a media discourse that has been a

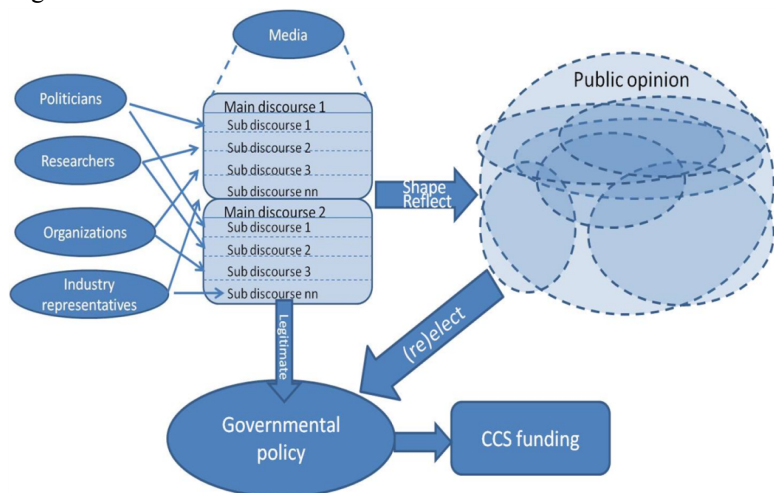


Fig. 6. Discourse and legitimization of political prioritization.

substantial part of the debate, and therefore a political reality, of the Norwegian publicity since 2007. The Moon Landing discourse defines not only what is true from one perspective, but as sub and counter discourses exist only as related to the main discourse, sub and counter discourses are an aspect of the structure of the hegemonic discourse; thus determine how CCS can be discussed and understood in the Norwegian media. The existence of such a discourse and the amount of support within it, legitimize CCS R&D funding as well as such decisions as CO2 cleaning and framework condition for the industry.

Among the thousands of articles on the governments Moon Landing there does exist articles that are fact based and present CCS in a way that would educate the reader. However, those articles are mainly published in specialized magazines, and even in those magazines these articles are a minority. CCS as R&D does in reality not exist at all; in main stream media CCS is synonymous with political promises, and the present coalition government. CCS in itself exists only as effect, and specifically an emotional effect – either good or bad – on something like the climate or the public, and in which the government has caused.

A clear trend in the data is that the essence of all discussions about CCS really is about politics, or more to the point – the political promise of a moon landing. The research and development of CCS technology exists as a black box; an effect that causes an emotional response on behalf of the environment, the public or perhaps the economy.

CCS does not exist in Norwegian media as processes of research and development; *as effect* on the other hand, CCS exist as either something good or something bad and which in turn affects emotional responses. A conclusion from this discourse analysis is that one major premise for the legitimation of political decision-making, thereby CCS funding, is not really are about CCS but politics in the form of narratives on promises, alliances and emotions caused by political promises and actions.

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