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## Speaking about the “Environment” – topical change in Swedish nuclear waste discourse

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## Speaking about the “Environment” – topical change in Swedish nuclear waste discourse

### Mówiąc o “Środowisku” – zmiana argumentacyjna w szwedzkim dyskursie na temat odpadów radioaktywnych

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#### Abstract

This article offers a rhetorical perspective on the Swedish project of nuclear waste management – how *inventio* has been shaped throughout the project, with focus on alignment of perspectives and adaptation of argument to achieve a solution to an urgent problem – finding a location for spent nuclear fuel repository. The study finds that the organizations representing the “environmental” perspective have gradually (1970s-2010s) integrated the argumentation of the nuclear industry into their own position. Also the treatment of “environment” as a material ground for argument has changed over the years – from a separated topic for the critics of the repository project, to a commonplace argument, and from a local value to a political notion.

Niniejszy artykuł przyjmuje perspektywę retoryczną w badaniu dyskursu na temat odpadów radioaktywnych w Szwecji. Sprawdza on jak kształtowane jest *inventio* w publicznej debacie nad lokalizacją depozytu odpadów nuklearnych, ze szczególnym uwzględnieniem procesu adaptacji argumentów i uzgadniania wspólnych pozycji między stroną pro-ekologiczną i stroną instytucjonalną. Badanie wykazuje jak organizacje ekologiczne stopniowo (od lat 1970tych do 2010-tych) zintegrowały swoją argumentację z postulatami przemysłu nuklearnego. Zmieniało się między innymi użycie argumentu ochrony środowiska naturalnego: z kluczowej przesłanki materialnej do formalnego toposu, oraz z wartości lokalnej wspólnoty po konstrukt polityczny.

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#### Key words

*inventio*, argument alignment, conceptual chiasm, environmental perspective, nuclear waste management  
*inventio*, uzgadnianie pozycji, chiasm, perspektywa ekologiczna, odpady radioaktywne

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## Speaking about the “Environment” – topical change in Swedish nuclear waste discourse

### 1. Introduction

Following the argumentative turn in planning processes, democratic deliberation has been promoted, and many ways to institutionalize the deliberation process have been suggested. One question has been how organized discussion can favor democratic values such as inclusion and at the same time distinguish between relevant alternatives (Dryzek 1993). Regarding projects that risk environmental and health damage, the question of inclusion of arguments have been evident. Argumentation often emanates from a vernacular perspective, but is developed to fit the rationality that it was aimed at criticizing in the first place (Beck 1998). From a rhetorical point of view, it has been suggested that an inquiry of institutionalized deliberation should emphasize the *inventio* process of argument (Simmons 2007).

This article offers a rhetorical perspective on the Swedish project of nuclear waste management – how *inventio* has been shaped throughout the project. The main argument of the article is that the topic of environment has developed in relation to conscious choices made by speakers to adjust their messages, in two essential ways. Firstly, the organizations representing an environmental perspective on high level waste (HLW henceforth) management have changed their topics of argument in order to better suit targeted audiences. Secondly, the topic of “environment” has been used and reshaped to fit different rhetorical purposes. It has changed from a local community issue to a topic at a more general level. These two types of adjustment of argument have supported a rapprochement between local communities and the nuclear industry.

A central aspect of HLW management is the urgency of a decision on the issue. There is a global need to find a permanent solution on how to take care of the waste, and at least since the 1970s, HLW management has been on the agenda worldwide. According to the International Atomic Energy Association (IAEA) website in 2016, 30 countries produce nuclear energy, none of which has built a long term

storage for HLW.<sup>1</sup> Countries have struggled with stalemates on the question of the storage of HLW, partly due to lack of trust in the industry's ability to manage the project at the local community level.

In this picture of global urgency and stalemate, there are at least two reasons why the Swedish case of HLW management is interesting for an international audience of rhetorical scholars. The first reason is that it can be regarded as a rare case of agreement between the local community and the nuclear industry internationally. Sweden is considered as a positive example of how trust is built (Flynn et al. 2005). Swedish nuclear industry has also been considered as an international forerunner in the search for a technical solution for encapsulation and long term storage of nuclear waste, with the method KBS-3.<sup>2</sup>

The second reason for the interest in the Swedish HLW case has to do with the longevity of the deliberation process. In 2011, the Swedish Nuclear Fuel and Waste Management Co (SKB) submitted an application for constructing a final (or long term) depository for HLW at Forsmark, Östhammar. As I write this in December, 2016, the Swedish government is considering the application. The SKB application is the result of nearly 40 years of geological research and deliberations with local communities, initiated by the government in the 1970s (through the committee Program Council on Radioactive Waste, PRAV) and continued in the 1980s by the company SKB (owned by the nuclear industry). More recently, hearings have been arranged as a support for the government's assessment of SKB's application (2006-2008).

The meetings in the 1970s and 1980s between the project owners and the local communities can be regarded as less institutionalized, *ad hoc* arrangements than the hearings of 2008. Thus, the comparison over time can focus on how rhetorical development parallels the institutionalization of deliberation. Protests against geological investigations were organized under the name of local Save-groups on 8-10 locations around Sweden.<sup>3</sup> In at least two districts, the protests led to a halt of the geological investigations: Kynnefjäll, a mountain area near Gothenburg (1979) and in Almunge, Uppsala, near Stockholm (1985). I have compared hearings in

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1. The IAEA is an international organization for "the safe, secure and peaceful uses of nuclear science and technology" with 168 member states (2016). It is agreed among the IAEA member states that each country is responsible for the nuclear waste within its borders. For an introduction to the nuclear fuel cycle, see <https://www.iaea.org/newscenter/multimedia/photoessays/iaea-introduction-nuclear-fuel-cycle>, 2016-06-14, and for the internationally agreed regulations on waste management, see Joint Convention on the safety of spent fuel management and on the safety of radioactive waste management, Preamble (xi).

2. For an overview of the international situation in comparison to Sweden, see Journal of Risk Research, 2009, 12 (7-8), a special issue on nuclear waste management. The method KBS-3 is "based on three protective barriers: a copper canister, a buffer of bentonite clay and the surrounding rock. The spent (used) fuel rods are encased in copper canisters with an inner canister (insert) of cast iron, and the canisters are emplaced, surrounded by a barrier of bentonite clay, in a tunnel system at a depth of about 500 metres in the bedrock". <http://www.karnavfallsradet.se/en/nuclear-waste-and-final-disposal/alternative-methods-for-disposal-of-spent-nuclear-fuel/the-kbs-3-me> 2016-06-20

3. Information on the "Waste Network" can be found on their homepage <http://www.avfallskedjan.se>, 2016-06-20..

these two districts to current statements of the groups representing the environmentalist position, in order to study closer the change from local turmoil at drilling spots to the ultimate acceptance of the project and relatively peaceful relations between different actors.

The question for this article is how the alignment of perspectives is enacted rhetorically. There are two main aspects that will be explained: firstly, the organizations representing the “environmental” perspective have integrated the argumentation of the project owners; secondly, the treatment of “environment” as a material ground for argument has changed over the years – from a separated topic for the critics of the HLW project, to a commonplace argument.

## 2. Theoretical and methodological concepts

### 2.1 Topoi and the use of conceptual chiasm

One often quoted definition of rhetorical practice is that of Aristotle, in translation by George A. Kennedy: “Let rhetoric be defined as an ability, in each particular case, to see the available means of persuasion” (2007, 1:2:1, 1355b). The discipline of rhetoric focuses on persuasive elements in discourses and conceives of ‘rhetoricity’ as being integrated into many different kinds of communication. One guiding question for research is how strong the rhetoricity, the potential for persuasion, is in one particular situation. A related question is how the available means for persuasion are enacted by the people involved in one particular case. I will argue that the case of rhetoric in the Swedish HLW issue shows how actors strive to enhance the potential for persuasion, or rhetoricity, through an adjustment of argument across perspectives. The case thus illustrates the creative potential of rhetorical argumentation with an emphasis on topoi. As Gabrielsen (2008) points out – the underlying thought in rhetorical philosophy regarding topical invention is that every issue can be formulated in many different ways.

Topical adjustment could refer to the material ground for argumentation – in this case speakers would use the overarching topos of “environment” in the *inventio* process to frame more specific arguments. The material ground for argumentation emphasizes the heuristic and generative view on the *inventio* process. Topical invention could be seen as a pre-logical process, or a parallel to logical reasoning: we first choose the perspective, and then choose our arguments to fit that perspective (Gabrielsen 2009).

Topical adjustment could also refer to the rhetorical *form* of argument. Well-known forms with reference to Aristotle are analogy, definition, consequence, contrast. We see the logic of the argument through its form, as it works inferentially. The formal and material grounds of topoi can be regarded as two sides of a ‘problem solving’ approach of the *inventio* process. *Inventio* involves both a choice of

angle on the matter at hand, and a choice of formal contextualization of the matter. If ‘environment’ is chosen as a material ground for argumentation, it also needs a formal relation within the context (Gabrielsen 2008).

Of particular interest regarding the formal side of *inventio* is the figure of *conceptual chiasm*, as described as the “parallel reversal of disciplinary expectations” with the effect that “thought patterns of each side are forced temporarily to cross over to the other side” (Ceccarelli 2001, 5). Ceccarelli gives an example from the development of evolutionary biology. Difficulties of understanding across disciplines led to a communication breakdown between “naturalists and the more experimental geneticists” in the 1920s. Despite the battle for academic territory, positions and for scarce resources, interdisciplinary agreement was desired, and the eventual exchange between disciplines “allowed naturalists and geneticists to work together under a common set of interdisciplinary presuppositions” (21). According to Ceccarelli, this exchange between academic branches was made possible since the conceptual chiasm functioned as a reinforcement of concepts, without anyone gaining the ultimate “victory”. The book *Genetics and the Origin of Species* by Dobzhansky popularized difficult science at the right time. The book explained mathematical information, altered misconceptions throughout the academy about concurring fields and offered a social motive to construct an exchange between traditions. Rhetorically, this worked through the establishment of clarity to allow the readers to see their own discipline in terms of the other’s, without one dominating the other. Ceccarelli encourages the application of the conceptual chiasm beyond science, as she suspects that this form of argument could be a rhetorical strategy in negotiation discourse on a larger scale.

## 2.2 Social movement criticism and rhetorical development towards alignment

From Ceccarelli’s study it is possible to draw out a number of contextual ingredients that would be needed for a conceptual chiasm to increase rhetoricity: a communication breakdown, a social motive for reconciliation, an authoritative voice (such as the field of mathematics in Dobzhansky’s case), a mediator with the right understanding of the disciplines and their vocabularies (Dobzhansky himself), and the right time for ideas to evolve cognitively. In this project, a similar pattern will be presented with reference to the case of Swedish HLW management. In order to contextualize it within the political and state administration area (rather than science), social movement criticism can be engaged. It is assumed that patterns of rhetoric in the process of social change can be identified, and that those patterns are dependent on the interaction between the *pro* and *contra* movement of an issue. With the example of the North American abortion controversy, previous research has identified how different stages in the argumentation unfold as a “responsive, developing set of arguments” (Condit Railsback 1984, 419).

While Condit Railsback's study describes how argumentation develops when fragmentation of movements is seen as the last stage of argumentation, this article looks at how argumentation develops when the last stage seems to be unification. The Swedish HLW case initially resembled a communication breakdown similar to the nuclear accident of Three Mile Island (TMI), Pennsylvania, in 1979 (Farrell and Goodnight 1981). The lack of adequate communication practices not only sustained, but also generated societal crisis. Likewise, the initial lack of adjustment between perspectives is relevant to explain the development of conflict in the Swedish HLW issue. In 1979 Kynnefjäll, a mountain area north of Gothenburg, was the first site investigated for the long term storage of HLW, which resulted in a clash between SKB and the local community (see picture 1). The Kynnefjäll occasion is described as one of the longest civilian conflicts in Western Europe, as the guarding of parts of the mountain area on the part of the local community continued for twenty years (Dielemans and Quistberg 2002, 281). A cabin was built for people to stay in while watch-keeping the road to the mountain (see picture 2). Almunge, outside Uppsala in Sweden, was the last site in a row of many more or less successful geological inventory investigations conducted by SKB. The conflict at Almunge was the reason for a halt in the site investigation project until the 1990s. After a turmoil that ended with police escorting people from the drilling spot, covered by national press and television news (see picture 3), SKB halted the HLW project and decided to reconsider its communication strategies toward local communities. After 1985, the project owner's strategy of approaching the local communities changed fundamentally toward a more cooperative and externally oriented approach (Eriksson 2003). Thus, the Swedish case is different from other countries facing the same problem of HLW management. Swedish deliberation takes a cooperative turn, and I will argue that the rhetorical use of *topoi* is central for this change in relations between SKB and local communities. In order to illustrate how this change from conflict to cooperation has evolved, the following account will concentrate on the change in topics of argumentation between participants at meetings on three occasions: October 2, 1979 (Kynnefjäll), October 23, 1985 (Almunge), and the situation at the time of hearings in 2008.

### 3. Topical change of *pro/contra* movement

Local meetings in the initial state of geological investigations were held at Kynnefjäll (1979) and Almunge (1985), with participants from the local government, involved organizations such as the Save-groups, the industry and state authorities. The analysis is based on close reading of meeting protocols, letters, annual reports, minutes, newsletters and pamphlets from organizational archives, combined with an analysis of video/dvd recordings from meetings, and interviews

with participants.<sup>4</sup> The presentation will evolve around how the formal topic of *definition* diverged, and discuss how the material grounds for argumentation reflect that divergence.

### ***Inventio of the project owners***

In 1975, the governmental Program Council for Radioactive Waste (PRAV) initiated nationally coordinated research on HLW geological repository. In 1977, test drillings were initiated throughout the country, in order to study the geological prerequisites, and in 1979 drillings were planned to take place at the mountain area Kynnefjäll near Gothenburg in Sweden. The PRAV board did discuss information issues in 13 of 27 meetings. The target audience of communication was defined as persons with direct decision-making power such as land owners and the local community board. The larger public was to be reached through information brochures and mass media channels. There was no initial formulation of intentions to meet with locals. In 1979, a brochure was distributed to “politicians, administrators and mass media”, with the outspoken intention to give “short, comprehensible information” and to “avoid values and uncertainties” (Programrådet För Radioaktivt Avfall 1977). The committee also intended to delimit the issue in association with the question of Swedish nuclear energy, and forwarded an “objective” handling of the HLW issue, without reference to energy politics (Programrådet för Radioaktivt Avfall 1976). The committee defined the waste management project narrowly on a time scale. There was no mention of a long term plan to actually build storage facilities at the locations of geological investigations. When the local government took the initiative to hold a meeting on 2nd Oct. 1979, PRAV decided not to prepare any explicit reference to the later stages of the project in their presentation, such as the final construction of a facility for final storage. Instruction was given to be prepared for questions about the HLW storage project in its entirety, but not to actively speak about that (Programrådet För Radioaktivt Avfall 1979a).

### ***Inventio of the protest group***

In 1979, the “Save Kynnefjäll” group was organized as the first protest group against PRAV. The local engagement was initially motivated by a common concern about the protection of the local environment at the mountain Kynnefjäll, and by the wish to discuss the matter with the project owners. The group “Save Kynnefjäll” was an umbrella organization that gathered local networks with interests in outdoor life and environmental conservation, and local branches of the

4. This analysis is part of a larger project of doctoral dissertation entitled *Sustainable dialogue? Rhetoric in meetings on nuclear waste management* defended at 16 September 2016. The material that this article builds on has mainly been collected at the archive of “Programrådet för radioaktivt avfall” (PRAV), Swedish National Archive, the archive of “Aktionsgruppen Rädda Uppsala” (Save Uppsala), Archive for Popular Movements, Uppsala, and the archive of “Föreningen Rädda Kynnefjäll” (Save Kynnefjäll), Archive for Popular Movements, Uddevalla.



Centre Party. The Centre Party of Sweden has historically gathered voters from the countryside, and was at the time one of the most ardent opponents of the Swedish nuclear energy program.

The “Save Kynnefjäll” group denounced the drillings on the mountain Kynnefjäll and the technical method chosen for encapsulation of the radioactive material (KBS-3). The topoi of argumentation of “Save Kynnefjäll” concerned precisely the issues that PRAV had chosen to exclude. Their target audience was the broader local public near the drilling area, not just decision makers as in PRAV’s case. Regarding the material topics of argument, a vernacular, local focus was favored rather than PRAV’s “objective” intent. Contrary to PRAV, Save Kynnefjäll had a broad understanding of the HLW project, both regarding the relation to Swedish nuclear energy expansion, and regarding the geological investigation as part of a later project to construct a facility for final storage of HLW. In a letter to PRAV, the Tanum municipality board made an “early statement against a facility for burnt out nuclear fuel in the Tanum community” (Programrådet För Radioaktivt Avfall 1979b).

A central source of rhetorical conflict between PRAV and Save Kynnefjäll had to do with a narrow versus a broad definition of the issue – regarding target audiences and the material topics of argumentation (project scope and reference to nuclear expansion). The Save Kynnefjäll group based their nonviolent resistance to geological investigations on a broad understanding of the HLW project, including nuclear expansion (which was seen as a threat to the environment). The broad definition of the HLW project led the protest group to fear a large infrastructure and industrial project at the mountain, which would lead to the ruination of the trekking and leisure area of Kynnefjäll. The topic of environment also generated arguments regarding the robustness of the encapsulation method KBS-3. In case of a leakage radioactive materials would leak out with contamination of ground water as a result.

The different definitions of the time and scope of the project were evident in reactions after a meeting on 2 Oct. 1979 between Save Kynnefjäll and the project owners. A letter to the editor in the local newspaper Bohuslänningen explains the communication problems and misunderstandings:

The greatest misunderstanding that has arisen is probably the belief that PRAV and [Swedish Geological Survey] are of the opinion that Kynnefjäll is a perfect place for a final deposition of radioactive waste from a geological point of view. With exception for the geologist from Gothenburg, I got the impression that the people in the panel at the meeting already at that time held the opinion that most facts spoke against Kynnefjäll as a place for storage, but that there was still an interest in investigating the gneiss because of its appearance at surface of land there. (Programrådet För Radioaktivt Avfall 1980)

PRAV describes their view on the communication problems:

The geological investigations of the program council have for the most part, by the residents in the concerned municipalities, been understood as a herald of final storage localization at the drilling spot. (...) The information activities of the council have thus in large part been focused on explanations of the aim of the investigations and on gaining acceptance of the necessity of these [geological] investigations. (Programrådet För Radioaktivt Avfall 1982, 74)

At a small meeting at the drilling spot in April 1980, a PRAV representative confirmed that the protests had interrupted the drilling operations for the foreseeable future (Noresson 1985, 78).

### **Topical modification in 1985**

After the turmoil at Kynnefjäll, the organization of the HLW project changed. The governmental committee PRAV was replaced by the Swedish Nuclear Fuel and Waste Management Company (SKB), owned by the nuclear industry. SKB continued geological investigations on different locations in Sweden, and met a number of local Save-groups that opposed their project. The last drilling location in the 1980s was Almunge, near Uppsala in central Sweden.

According to an interview with one of the managers of the information activities at SKB at that time, information to a narrow audience with direct decision power was prioritized at Almunge, similarly as in Kynnefjäll. Information to the wider public was assumed to be taken care of by the municipality. In an article in the national newspaper “Dagens Nyheter” on 23rd Oct. 1985, the CEO of SKB responded to protests and explained that information was supposed to be addressed to the locals after the initiation of drillings. The local community organized the group “Save Uppsala” in Almunge 1985. The group questioned the method KBS-3, and articulated mistrust in SKB research. The group was mainly worried about the technical aspects of the project, but not principally against a HLW repository in the area. The crucial point was to find a safe solution. The position is evident in a motion to the Almunge local parliament:

It would be natural to appoint a new scientific and unpolitic investigation committee for a decent detailed analysis of the problems and the different alternatives when it comes to the final deposition of spent nuclear fuel. When this investigative phase is completed, it might be time to contact suitable local communities for a discussion on the possibilities of siting a depository. It is also reasonable that the inhabitants in the communities concerned could take a stand through local referenda. If the responsible authorities chose this working method, we would most likely avoid these arduous discussions and demonstrations regarding every drilling test. To start drilling before proper investigation of a waste management method, and before convincing the local community of the possibilities for fulfilment of the security demands, is not very rational. (Aktionsgruppen Rädda Uppsala 1985b)

The primary concern was to request proper information before accepting cooperation with SKB. This request included the demand for convincing presentations of the security measures and the technical method of spent nuclear fuel storage (KBS-3). The chairperson stated in an informal meeting at a campfire on the drilling spot, video recorded 22nd Oct. 1985:

Yesterday SKB sent out mass information by letter to some of the households here in Almunge and Knutby, not to all, probably to people living nearby. That's the information we've got, yesterday that is. I said to a SKB representative 'Why can't you come here and tell us how harmless this is? Can't you come here and convince us that this is harmless. Because if you can do that, then we will disappear immediately. But we don't want any of the SKB geologists here, they are at your service. We want an impartial geologist. And then we want the right to ask questions.'

A meeting at Almunge in 1985 involved the residents, the group "Save Uppsala", the local government, the entrepreneur responsible for the drilling operation and the company SKB (recorded on video). The main themes of the questions from the audience were the following: 1) Priorities: regarding the balance between economy and security. 2) Science: The method KBS-3 and its alternatives. Geological issues such as movements of the rock, earthquakes, future sea levels. 3) Personal issues: Contamination of groundwater from the project. Worries about decreased popularity of the area. 4) Practical issues: The grounds for choosing Almunge as a place for a depository. Radiation risks in the working place environment of the depository project. The possibility of import of HLW. Transfer of information about the dangers of the repository over generations. 5) Information: Questions about false information. The request of more information.

Compared to the argumentation of the "Save Kynnefjäll" group, the topic of environment in the Almunge case excluded opposition against the construction of storage facility per se with reference to environmental values, but included concern about the security of the technical solution for encapsulation of the radioactive materials. The Almunge group also differed from the Kynnefjäll group regarding the attitude on energy policy. Whereas in Kynnefjäll, the anti-nuclear sentiment was a ground for argumentation, in the Almunge case there was a more evident distance towards anti-nuclear rhetoric. Word choice and relations to the anti-nuclear organizations were topics of discussion. Members claimed that neutrality regarding the nuclear energy issue was a crucial survival tactic (Aktionsgruppen Rädda Uppsala 1986).

In sum, the definitions of the project owner remained the same in 1985 compared to 1979. The Save Uppsala group used a broad definition of the audience and the project scope in a similar way as Save Kynnefjäll in 1979. The definition of the issue was slightly narrower in 1985 from the Save Uppsala group, since it excluded the topic of anti-nuclear opinion and the protest against building a facility for HLW storage.

### **The situation since 2008 – alignment of perspectives**

With time, the emphasis on the *pro*, rather than *contra* position of local organizations has been strengthened. The views of the *Opinion group for a Safe Storage* (OSS) on a *pro* or *contra* position are formulated as such (interview with the president in 2011):

OSS is named the ‘Opinion group for a safe storage’. As the local government entered a siting process, and took a parliamentary decision on entering the process, now they are allowed to drill here, and let’s see where it takes us. Then this opinion-making phase is over somehow. So then we decided to be a review group.

Previous Save-groups of Kynnefjäll and Almunge were generally against what they saw as an unsafe management of the HLW project. They promoted a civic engagement outside the parliamentary system (although with support from local governments and political parties). The OSS group is instead trying to participate within the parliamentary system and promote “safe storage” through a democratic review process led by the local and national government. The interviewed person states that there is no reason to act in opposition when the local parliament, in a democratic fashion, has decided to acknowledge the project. The OSS is now included in the HLW project as a legitimate actor, with financing from the state to participate in meetings and produce comments on the SKB reports to the authorities. From this inclusion follows responsibility to engage in a manner that can be accepted by the other parties:

Now we’re an actor, financed in the same way as the Swedish National Council for Nuclear Waste, as the local government, as the authorities, as the SKB. ././ As a result, we have taken on larger responsibility to participate, and there are greater expectations on our constructive contribution.

I ask the interview person to specify the “constructive” part in the participation, and he answers:

We, as an environmental organization, haven’t got any vested interest in the issue, and we can take a completely different stance than the other actors. We can add a political dimension, an environmental political dimension. So we consider: is this choice of method [KBS-3] presented in a way to establish trust in the fact that environmental concerns have directed the criteria for choice of method and siting. That’s what we review.

OSS is not interested in any demonstrations and blocking at drilling spots, but more interested in persuading decision-makers about their arguments regarding the environmental issue. The group differs from earlier Save-groups in Kynnefjäll and Almunge, not with regard to environmental values or scientific critique, but with regard to the topoi of their argument. The “environmental” topic is still the

most important reason for participating, but the ground for acting symbolically to hinder the siting project in 1979/1985 is today the very subject of discussion.

One crucial issue in the development from *contra* to *pro* is the relation with the most radical critics of the HLW project, “The People’s Campaign against Nuclear Energy and Armament” (FMK). FMK is the main organization opposing nuclear expansion in Sweden, and thus the subject of discussion in 1985 when Save Uppsala decided to exclude the topic of nuclear politics from their argumentation. The relation with FMK is described by the OSS representative in 2011

The OSS has roots among nuclear industrial critics in the local community, with connections to the Centre party and the [FMK]. The [FMK] was in minority and the position of the OSS was stated early not to act on the nuclear energy issue, only on the waste issue. The reason for that position was that it could scare away individuals that were dubious about the design of the waste project but positive towards nuclear power in itself. The OSS reasoned that there was a greater possibility to be heard if we would choose that path.

Over time, the tendency to narrow the definition of the HLW issue is paralleled by the nuclear industry’s achievement to define their project in environmentally friendly terms. Regarding the topical change of the HLW project owners, the principal topic is *recycling*. The recycling argument was made evident in 2012, when the government council on nuclear waste management held a seminar with participants from nuclear industrial countries. In report from the seminar, the concept is described:

According to the KBS-3-method, the parts not yet spent of the fuel are deposited directly in an end repository. This is usually called open fuel cycle. An alternative is closed fuel cycle, meaning that the spent nuclear fuel is recycled as fuel in existing and future nuclear reactors after reprocessing. The amount of waste and the time length of its harmful state could be reduced considerably. (Statens Offentliga Utredningar 2013, 65)

SKB is using the wording of the Swedish Environmental Code and its paragraphs when describing the process of recycling, and stating that this perspective would forward spent nuclear fuel as a resource, not as waste. (Svensk Kärnbränslehantering AB 2010, 34). Recycling, a sub-topic of the environmental topic, aligns the environmental values with the nuclear expansion project, which is possible with the help of the critique against the safety of the KBS-3 method. The recycling of radioactive waste would reduce the need for final encapsulation. This way of associating the reprocessing of spent nuclear fuel with environmental discourse is discussed internationally as a ‘greenwashing’ strategy (Oelrich 2010).

#### 4. Conclusion

There is a tendency for organizations within the HLW discourse today to describe themselves as “pro” movements, with implied distance toward “anti” movements, and to distance their argumentation from anti-nuclear political opinions. The industry, previously in opposition to the environmental movement, is now associating to an environment topic. SKB argumentation can be seen as a complement to what has been referred to by Corvellec (2006) as an integration of the environmental perspective in the argumentation of the pro-nuclear discourse.

The evolving topical change might be regarded as a dialogic enterprise, a “conceptual chiasm”: the alignment of perspectives that used to be antagonistic by a gradual redefinition of the issue. The selective use of *topoi* in the debate (e.g. by the OSS) was instrumental in the topical shift. The rhetorical purpose of these operations could be to strengthen the ethos of the speaker in relation to the image of the rhetorical audience. But the question remains about who gains from this integration of perspectives. In one way, it is a victory for the environmental topic to have a legitimate place in the discussion. On the other hand, the actors forwarding the environment topic have accepted the path forward as formulated by SKB.

Previous discourse oriented studies on Swedish nuclear waste management have proposed that organizing and arguing are symmetrically related: “Arguing contributes to (successful) organizing and organizing is a condition of (successful) arguing” (Corvellec 2006, 250). In Corvellec’s study, the organization “Miljövänner för kärnkraft” (MFK, translated as Environmentalists for nuclear power) has been shown as aligning the concepts of pro-nuclear power and environmentalism. However, this article has expanded the notion of argument alignment, suggesting that it could be seen as a more general development within Swedish nuclear waste discourse.

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## Appendix



Picture 1.



Picture 2.



Picture 3.