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Paradoxes of power: Dialogue as a regulatory strategy in the Norwegian oil and gas industry

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ABSTRACT

This paper explores how the Petroleum Safety Authority Norway applied dialogue as a key feature in the regulatory strategy and practice over a ten-year period from 2009 to 2019. The analysis, drawing on theories on regulation and sensemaking, explores power relations and identity construction in encounters between the regulator and regulatees. The data material comprises texts from web-sites, documents, investigation reports and focus group interviews. We conclude that the dialogue is embedded with paradoxes, infused with power, yet functions as a potent policy instrument. The power base of the regulatory authorities partly depends on enterprises' and the industry's need for a good reputation. We expand the theoretical framework by highlighting paradoxes of power and introducing the concepts of 'sensesharing' and 'conditional sensegiving'.

1. Introduction

Exploration and production of oil and gas are complex, costly, potentially hazardous and pose risks to health, safety and environment (HSE). The Deepwater Horizon drilling rig explosion in the Gulf of Mexico in 2010, which killed 11 people and caused the worst spills on record, is a reminder of the risks involved and of the fatal and devastating consequences of major accidents. It is therefore important that operations are carried out in a safe way throughout the petroleum industry life cycle, from exploration and drilling to development, operation, cessation and removal. A regulatory regime that investigates and addresses problems and stimulates players to improve performance and prevent accidents is important in ensuring offshore safety (Lindøe et al., 2014). The Norwegian petroleum industry regulatory regime has received international attention due to its characteristics and the extensive use of dialogue as policy instrument rather than formal sanctions, in cases of violations (Hart, 2007; Thurber et al., 2011). The Norwegian path has led to a unique regulatory edifice which is flexible, yet robust (Forseth and Rosness, 2015, 2017, Engen, Lindøe & Hansen 2017, Lindøe and Engen 2019, Moses and Letnes, 2018, Rosness and Forseth, 2014). Dialogue, however, is not the only policy instrument in use, and the regulator can exercise power and escalate sanctions when deemed necessary.

Dialogue as a policy instrument within a regulatory regime is an ambiguous concept and there is no single agreed upon definition of this term (Forseth and Rosness, 2017). There is also a lack of research on how a regulatory regime that relies heavily on dialogue rather than formal sanctions can exert sufficient influence to attain its goals (cf. also Parker, 2013). However, the Petroleum Safety Authority Norway (PSA) seems to have a great impact upon the industry (Engen et al., 2013, 2017). There have been, and still are, debates about the challenges for this kind of regime in light of changing conditions such as recession and cost cutting in the industry and the pressure towards harmonizing rules and standards and the influx of new (small) players (Engen et al., 2017, Forseth and Rosness, 2017).

The aim of this paper is to explore and analyse how the PSA applies dialogue as key feature in the regulatory strategy and practice. Our study approaches regulatory dialogues from two perspectives. The first is the exploration of how the PSA and the industry make sense of dialogue as a regulatory strategy and policy instrument. The second is the exploration of how the PSA employs sensegiving as a source of power in regulatory activities as the use of power is embedded in the role of a regulatory body.

The article begins with positioning our research within the international literature outlining literatures on power, responsive regulation, regulatory conversations, sensemaking and narratives. We then summarize some crucial aspects of the Norwegian context as a backcloth for the analysis. Next, we outline the data materials and research methods, while the remaining sections present our analyses and discuss our findings. The research questions will be presented after the theory section.

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2. Theory

2.1. Perspectives on power

The use of the term 'power' in everyday language is well captured by Robert Dahl (1957, p. 203): "*A* has power over *B* to the extent that he can get *B* to do something that *B* would not otherwise do" (p. 203). In this study, we have applied a broader conception of power (Rosness et al., 2011, p. 5, see also Clegg 1989, Clegg et al., 2006), encompassing four different perspectives:

1. *Power in action.* This perspective addresses the things actors do to achieve their objectives against the preferences or interests of other actors. Power is manifested in actions that take place at specific points in time. A regulator may, for instance, impose a strict deadline in order to convey a sense of urgency and importance and to deprive a regulatee of time to mobilise counterarguments.
2. *Power as a resource.* In this perspective, power is something actors *have*, and use to make other actors do things they otherwise would not do. The actors can be individuals, groups or organizations or governments. In this perspective, *A* has power over *B* because *A* controls the outcomes of events in which *B* has an interest (Hernes, 1978). A regulator may, for instance, be in a position to impose sanctions on a regulatee. This perspective is an important complement to "power in action", because some actors may possess resources that enable them to achieve their objectives without manifest actions that display the use of power.
3. *Power in collaboration and networks.* This perspective extends the previous perspective by conceptualizing how actors may achieve their objectives by collaborating and creating coalitions and alliances. As a consequence, power is no longer located "in" specific actors but distributed in networks of actors. A regulator may, for instance, try to coopt the regulated industry in an effort to improve the reputation of that industry by improving HSE conditions.
4. *Power in symbols and discourse.* In this perspective, power is not primarily something specific actors have (Foucault, 1969, 1970). Rather, power resides in discourse, i.e. in our use of language and symbols. Within a given domain of discourse, some statements appear meaningful and taken-for-granted, whereas others appear meaningless or irrelevant. Power may be hidden in things that are tacitly assumed rather than displayed in what is stated explicitly.

The everyday use of the term 'power' corresponds roughly to the first two perspectives. The term 'coercion' or 'coercive power' is typically used when *A* tries to restrain *B*'s scope of action by threatening to impose highly undesirable consequences on *B* if *B* fails to comply. We suggest that the everyday use of the term 'influence' may cover all four perspectives outlined above, but may at the same time exclude or de-emphasise the use of coercion.

2.2. Theories on regulation and power

Regulation may take the form of *control and command*, the regulator conducting inspections or audits and issuing formal sanctions in cases of non-compliance (Hood et al., 2001; Hopkins and Hale, 2002). The regulator, in this approach, applies the force of law to prohibit certain forms of conduct, to demand positive actions or to lay down conditions for entry into a sector (Baldwin et al., 2012 [1999]). In the *co-regulation* or *enforced self-regulation* approaches, the government supervises the self-regulatory activities carried out by companies, to ensure that companies perform the safety management functions that are defined by the performance-based rules. The regulatory authority may also encourage company reliance on industrial voluntary standards and foster the development of improved standards by industrial associations (Baram et al., 2014, part III) and may apply the force of law to enforce self-regulation.

Ayres and Braithwaite (1992) advocated *responsive regulation*, i.e. regulatory approaches where the regulator has access to a broad hierarchical range of sanctions and uses a tit-for-tat strategy in selecting their responses to non-conformities. This implies that the regulator initially meets non-conformities with soft reactions (typically some form of persuasion) and later escalates to deterrent or even incapacitating responses only when soft reactions fail to produce compliance. Ayres and Braithwaite proposed that regulators who have access to very severe reactions ("big sticks") and who adapt their reactions to the responses of the regulated firms, will be able to achieve more with persuasive measures. In this way the regulator may avoid the game of regulatory cat-and-mouse where the firms defy the spirit of the law by exploring loopholes, and the state writes more and more specific rules to cover the loopholes (Ayres and Braithwaite, 1992, p. 26). Ayres and Braithwaite argued that responsive regulation would work whether the regulatees are primarily motivated by a sense of responsibility or by a narrow pursuit of profit. However, the success of responsive regulation depends on the finesse of the regulator in manipulating the salience of sanction and the attribution of responsibility so that regulatory goals are maximally internalized, and so that deterrence and incapacitation works when internalization fails (p. 50). The regulator should avoid unnecessary use of coercive power, but at the same time keep the industry convinced that deterrence and incapacitation will be used when necessary.

Ayres and Braithwaite propose that *tripartism*, i.e. the formalized involvement of public interest groups in the regulatory process, is an effective countermeasure against the risk of a close relationship between regulator and the regulatee leading to capture and corruption (pp. 54 ff). For the tit for tat-approach to be successful, a number of preconditions need to be fulfilled (Baldwin and Black, 2008, p. 64). There must be sufficiently frequent repeat interactions between the regulator and the regulatee to allow an escalation of reactions if this is needed. The regulator needs to have sufficient judicial, public, business and/or political support to escalate their reactions when necessary. The regulator must also be able to obtain the necessary information to judge the need to escalate their response.

Black (2002) discussed how discourse analysis can be used to analyze *regulatory conversations*, i.e. "the communicative interactions that occur between all involved in the 'regulatory space'". She argued that *enforcement officials construct identities of regulatees* based on their willingness and ability to comply with the regulation and that those identities are discursively produced and communicated throughout the organisation (Black 2002, p. 183). Moreover, the regulatory conversation also contributes to the discursive production of the identity of the regulator. The regulator may, e.g., in accordance with the recommendations of Ayres and Braithwaite (2002), seek to portray itself to the regulatee as a 'benign big gun'. In this study we will consider how the regulatory dialogue addresses the construction of the identity of regulatees, and how it influences the identity of the regulator and of the regulatory process. Black also suggested that regulatory conversations over time may create *interpretive communities*. At a deep level, a regulatory interpretive community may comprise understanding of, and commitment to, the goals and values of the regulatory system, and shared senses of the ways in which conflicts, inconsistencies and trade-offs may be addressed (p. 178). Black argued that "the existence of a legal interpretive community will not resolve interpretive problems in a

regulatory context, and furthermore may exacerbate them" (p. 177). It is therefore of interest to study to what extent regulatory conversations may help to create interpretive communities that transcend a narrow legalistic focus on the interpretation and application of formal rules.

2.3. Sensemaking and narratives

Weick introduced the notion 'organizational sensemaking' and studied how sensemaking activities can be triggered by a shock or a break in a routine (Weick 1988, 1993). There is no single agreed definition of sensemaking but there is a growing consensus that the concept refers to those processes by which people seek to understand and give meaning to "situations or events that are ambiguous, equivocal or confusing issues or events" (Brown, Colville and Pye 2015, p. 266; Maitlis and Sonenshein, 2010). Weick (1995) emphasized that individual identities are constructed out of the process of interaction and that people take cues for their identity from the conduct of others. They also make an active effort to influence this conduct. The literature on organizational identity proposes that organizations have identities but it is different from the identity of individuals. The crucial questions are: Who are we? How do we do things around here? The answers will be coloured by the history of the organization and the conditions. There is a limited body of work on sensemaking and institutions (Maitlis and Christanson, 2014, p. 108). We are interested in sensemaking processes that take place within the context of dialogue. We propose that the notion of identity construction and the idea of exerting power on others' sensemaking, can be applied to interactions between organizations, such as between regulator and regulatees.

The sensemaking literature has focussed inadequate attention on power and political processes, even though power provides a context for sensemaking (Maitlis and Christanson, 2014; Corley and Gioia, 2004). Gioia and Chittipeddi, 1991 introduced the notion of 'sensegiving' about the process of attempting to influence the sensemaking and meaning construction of others, and to move this towards a preferred definition of organizational reality (Gioia and Chittipeddi, 1991, p. 442). According to Corvelle and Risberg (2007, p. 307) most articles on sensegiving rely on a symmetrical approach to sensegiving and sensemaking. In order to explore issues such as power, Mills, 2010, p. 188 employed the notion of 'sensetaking', of less powerful actors adopting an interpretation of organizational reality as a consequence of the influence exerted by more powerful actors. Narratives can be a fruitful entry of elaborating on processes of sensemaking, sensegiving and sensetaking. The term 'narrative' carries many meanings and is often employed synonymously with 'story' (Riessman, 2008). Stories are only one type of narratives, and can be described as sequenced narratives that include an initial situation, a rupture, disturbance or unexpected action and a reaction and/or adjustment (Riessman, 2008, p. 6). Although narratives are situated knowledge, they can serve as an intake to broader social discourses and culture. It is important to underscore that there are no single or correct reading of a narrative, whether it has been spoken, written text or an image. Narratives invite listeners, readers or viewers to enter the perspective of the narrator/text, and can also function to mislead an audience or mobilize into action (p. 9). Consequently narratives need to be interpreted, which can be accomplished in different ways depending on the aims of the study. In this paper we will discuss how regulatory authorities set the rules and articulate their vision to others, but at the same time are constrained by meta-rules and formative contexts (Mills, Thurlow and Mills, 2010, p. 190). We also include viewpoints and narratives from regulatees.

Research questions

Based on this, we have formulated three research questions:

1. How does the Petroleum Safety Authority and the industry make sense of dialogue as a policy instrument as part of responsive regulation?
2. In what ways are the dialogue between regulator and regulatee infused with power?
3. To what extent and how does the PSA use the process of identity construction as a means to promote regulatory compliance?

3. Context

In order to understand the unique characteristics of the Norwegian regulatory regime we highlight some historical facts and incidents which have been crucial for its trajectory. Norway had little experience in oil exploitation at the start in the 1970s and the regulatory regime has developed over time. The government laid down a number of important principles emphasizing national control of all activities on the Norwegian continental shelf (NCS) and the state as an active part e.g. by establishing a national oil company (White paper, 76, 1970 – 71). The regulation of safety and the working environment was initially and primarily based on adapted prescriptive regulations, checklist-oriented inspections and government-based approval (Bang and Thuestad, 2014, pp. 244–46). The Ekofisk Bravo blowout in 1977 and the investigation after the capsizing of the Alexander Kielland platform in 1980, in which 123 people died, focused attention on the weaknesses of the traditional 'control and command' regulatory approach (Hopkins and Hale, 2002, Lindøe and Engen, 2019). This had major political and administrative consequences. In 1985 there was a paradigm shift and a new regulatory regime was introduced, a system of government-enforced self-regulation (internal control) (Bang and Thuestad, 2014, pp. 246-255). A goal setting and risk-based approach was introduced, operators becoming principally responsible for interpreting goal-based requirements and monitoring their compliance with regulations.

Today, the regulatory regime in the Norwegian oil and gas industry is characterised by a reliance on enforced self-regulation and a preference for 'soft' reactions to violations (Engen et al., 2013; Lindøe and Engen 2013). Comparing four different regulatory regimes for the safety of offshore oil and gas operations, Lindøe et al., 2014, p. 102 concluded that the United States stands apart with its "highly prescriptive, command-and-control approach and commitment to hard law and strict compliance". The United Kingdom, Australia and Norway are said to represent the 'new governance' co-regulatory model of performance, in which rules and regulator intervention are only used as a last resort. These regimes, however, practice co-regulation differently and exhibit different features and premises and different interactive relationships with the industry and its stakeholders. The United Kingdom features a safety case approach, in which companies are required to perform analyses of systemic hazards and risk prior to conducting operations. Australia also employs a safety case approach, but which is predominantly based on engineering expertise. The Australian approach has been criticized for a lack of social and behavioural science knowledge. The PSA Norway more commonly first reacts to inadequacies pointing to non-compliance and deficiencies and requesting the regulatee to diagnose the problems and finding solutions. They may provide other assistance, but without lessening the company's self-regulatory approach. In 2017 they halted operation on Goliat, the largest offshore platform in the Norwegian sector of the Barents Sea, because

problems with the electricity systems represented a major accident risk. The decision was made after a process of dialogue with the Italian company ENI, the operator of the platform, had failed to solve the problems. This exceptional case illustrates the regulator exercising power and escalating sanctions with stronger reactions when deemed necessary.

Tripartite collaboration between trade unions, employers' federations and the political and regulatory authorities is another important feature and has been flagged as a cornerstone of achieving a high safety level in the Norwegian oil and gas industry (Bang and Thuestad, 2014, Rosness and Forseth, 2014). We borrowed the term 'boxing and dancing" (Huzzard et al., 2004), to characterize the erosion and subsequent revitalisation of tripartite collaboration regarding the safety level on the NCS around 2000 (Rosness and Forseth, 2014). These features are important in understanding this regulatory regime in greater detail. The industrial context (the oil and gas sector) and its characteristics, are equally important.

4. Material and methods

4.1. Research design

Our research design was exploratory (Ritchie et al., 2014) [2003]; Silverman, 2017 [2000], and the purpose was to generate hypotheses concerning the working of dialogue in the interactions between the PSA and the regulatees with grounded theory as a source of inspiration (Corbin and Strauss, 2008). As a consequence, the data collection and the process of analysis could not fully be specified prior to the first analysis but had to evolve with the generation of tentative categories and concepts. In this analysis we draw on three data sets: texts from documents and websites, focus group interviews (PSA, management and workers' representatives in the industry). The different data sets complemented each other in throwing light on the working of dialogue. Texts on the PSA home page informed us about their rationale, intentions and claims concerning the use of dialogue, possibly modified by tactical or strategic considerations. Investigation reports with cover letters provided examples of how the PSA practiced dialogue in their interactions with the industry and gave us clues to formulate hypotheses concerning the use of identity construction to promote regulatory compliance. Focus group interviews with actors from the industry and the regulatory authorities revealed important qualities of the dialogue.

4.2. Data generation, data materials and ethics

From 2009 until 2019, we collected excerpts from the PSA web page, their magazine "Dialogue" and other reports concerning dialogue as a policy instrument. This gave us a picture of the public voice of the regulator. As members of a national research team in a joint project on robust regulation (The Research Council of Norway no. 183251), our team investigated tripartite collaboration in the petroleum industry (Rosness and Forseth, 2014). In a follow-up project (no. 233971) we analysed a strategic sample of investigation reports and public letters to companies in order to learn how the PSA practice the dialogue. Two important selection criteria were that it had to do with complex and serious incidents after 2000 and we searched for how the PSA wrote about non-compliance. Of particular interest was a public letter directed to the Executive Vice President in one company, and we therefore included the Gullfaks B incident as an exceptional case. The place, incidents and time are summarized in Table 1.

Due to space limitations, we will only highlight the most relevant aspects from the investigation reports that relate to our research questions here (see Rosness et al., 2017 for further details).

In order to elaborate on dialogue in regulatory practice and to validate preliminary findings, we conducted two focus group interviews with a purposive sample (Ritchie et al., 2013 [2003] of regulators at the PSA: the informants came from different divisions and had all experience from encounters with regulatees (see Table 2). In the analysis we treated them as institutional informants and we did not register any personal data. In April 2016 we covered three main themes: the voices of the regulator in accident reports (Rosness et al., 2017), supervision, and dialogue as a policy instrument (Dahl et al. 2017, Forseth and Rosness, 2017). We returned in January 2018 to discuss and validate new findings and to gather additional data on power relations and identity construction in interaction with regulatees. The focus group interviews were recorded and transcribed.

Through the joint research project we got access to anonymized raw data from interviews conducted by the principal investigator and his team in an expert committee commissioned by the Ministry of Labour and Social Affairs to write a report to the government on regulation in the petroleum industry: status quo and future challenges. They conducted focus groups interviews with a strategic sample of informants from the Ministry, the PSA and the industry (Engen et al., 2017). The selection of PSA informants included officers from five different divisions, two groups of managers at different levels and supervision coordinators. The big enterprises were asked to make arrangements for interviews with operating managers, safety representatives and shop stewards who took part in bipartite collaboration at the enterprise level. The secretariat of the expert committee contacted the smaller companies to recruit informants representing management and workers. The principal investigator took part in all the interviews together with different members of his task force. It is not statuary to get approvement from an ethical approving body in an expert investigation but steps were taken to secure informed consent. The informants received a letter from the Ministry stating the aim and topics of the interviews, explaining about voluntary participation and the right to withdraw. Informants were also informed that interviews would be recorded and transcribed and about their right to read transcripts. All the informants gave their consent for the data material to be used anonymously for research purposes after the hearing of the report. Data generation took place between March and June 2013, and some follow up interviews were held in May and June 2014. We got access to the anonymized transcripts and analysed them independently of the task force. We also discussed the findings with the principal investigator and our colleagues in the research project. An overview of the total numbers of focus group interviews and interviewees are presented in Table 2.

Table 1
Sample of investigation reports issued by the PSA after events and incidents.

Investigation report and installation	Event/incident	Year
Gyda	Fatal accident (falling chemical container)	2002
Gullfaks B	Gas leak	2010
Eldfisk	Emergency shutdown and acute oil spill to sea	2014
Scarabeo 8	Man-overboard incident	2015

Table 2
Cases, focus groups and number of participants.

Categories and organizations	Number of focus groups interviews	Number of persons
PSA, Ministry of Labour and Social Affairs	9	32
Major operators	8	24
New Licensees	11	18
Drilling entrepreneurs	2	6
Suppliers	3	9
Sum 2013	33	89
Additional interviews PSA 2014	3	12
Our focus group, PSA 2016	1	4
Our focus group, PSA 2018	1	4
Total	38	125

4.3. Data analysis

In line with an abductive, interpretative research methodology (Tavory and Timmermans, 2014), the analysis proceeded through several iterative steps. The process was very 'hands-on' to ensure that local narratives were grasped. We read and re-read the documentation, the interview transcripts, moving back and forth between data, coding, analysis, theory, new data, grouping of codes into categories as basis for new theoretical concepts. A selection of quotes are presented verbatim, to bring alive the sensemaking of the informants, and present enough raw data to make the analysis convincing. Such quotes are not self-explanatory and cannot be left alone as data without interpretation. The quotes and our interpretations are presented adjacently, and we have tried to signal the different voices: the authors, the informants or the documents. For sake of variation we employ the term actors, players or regulatees for the enterprises. We try to be as accurate as possible when presenting informants and positions, whilst at the same time retaining the anonymity of the interviewees. Taking part in meetings and conferences with the industry enabled us to gather hands-on knowledge of the practice of dialogue, to discuss and validate our findings and to achieve more nuanced analyses.

4.4. Limitations

Our data sets stem from a period of ten years. We included a sample of case-specific excerpts from the website of the PSA and other documents including investigation reports, and we had a purposive sample for the interviews. Consequently, it might be possible to find texts describing more features of the dialogue, and informants voicing more nuanced opinions regarding dialogue in regulation within different divisions of the PSA and in the industry. By conducting new interviews we might have gotten more information on the ambiguity of dialogue in the wake of cost cutting in the industry. One part of the interview data material was secondary data generated by our colleagues but we received the anonymous transcripts and performed the analysis independently of theirs. Besides, we validated our interpretations in our focus groups at the PSA as a compensatory measure. By not initiating a separate round of interviews in the industry, we contributed to using a data set in more depth and reducing the time and cost for informants and ourselves. The research approach was not very sensitive to developments over time within the period covered by our data, since the interviews were not systematically distributed over several years. In the the discussion we comment on the future of dialogue in the PSA regime and the generalisability of the findings.

5. Results and analysis

We start by analysing how the PSA interpreted and gave sense of dialogue as a policy instrument and encounters with enterprises. We then analyse how the dialogue was practised and how the industry made sense of encounters with the regulator.

5.1. Guide dog and watchdog: The PSA giving a sense of dialogue in regulation

The PSA described itself, according to its website, as an 'independent government regulator with responsibility for safety, emergency preparedness and the working environment in the Norwegian oil and gas industry' (Petroleum Safety Authority (PSA), n.d. Supervision, PSA, 2017. Safety and responsibility). In colloquial terms, the PSA summarized its societal mission as *both the guide dog and watchdog of the industry* (PSA, n.d. About us). The PSA underscored that they pursue risk-based regulation, and that it is the companies' responsibility to monitor that they comply with laws and regulations (PSA, n.d. How we work). The supervisory regime is built on the view that a regulator cannot inspect quality into the petroleum sector. The PSA advocated a broad definition of supervision:

> *Supervision embraces much more than inspections of offshore facilities and land-based plants. This term refers to all contact between us as the regulator and the regulated object [our underlining]. ('Supervision', psa. no)*

The encounters between regulator and regulatee took on different forms, which included supervisory activities (PSA, n.d. Supervision): meetings with companies, acquiring data about accidents and incidents, considering company development plans, applications for consent to conduct activities and investigating accidents.

A general principle in their interaction with enterprises was that both management and workers' representatives (union officials and safety representatives) were to be present at meetings and take part in the dialogue. The PSA, in addition to advocating such bipartite cooperation at each workplace, promoted tripartite collaboration between representatives from the employers, employees and the authorities.

> *Two important arenas* have *been established for such tripartite collaboration in the petroleum sector – the Regulatory Forum and the Safety Forum. In these arenas, the parties can join forces in a constructive collaboration on improvements, including for safety and the working environment – an asset all the parties say they want to preserve and develop* (PSA , 2016. The Norwegian Model).

We will come back to how such arenas could be used to build consensus. Another feature of this regulatory regime is that the public is given unrestricted access to accident investigation reports, reports from inspections and correspondence from the PSA to the players. These were all published on the PSA website. This policy was in accordance with the principle of free access to public records. It, however, also implied that the PSA could influence the reputation of the regulatees, and thus these companies' identities. We were told in our focus interviews that PSA officers were careful not to abuse this power, and that accident investigation reports were therefore submitted to a rigorous approval procedure.

The PSA elaborated on dialogue as a desired and prioritised key element in contacts between the PSA and the industry *('Safety – status and signals 2008-2009'* annual report and again published as a separate article on the PSA home page (PSA, 2009. Safety status and signals)).

> *Dialogue is a key element in contacts between the PSA and the many different players on the NCS [The Norwegian Continental Shelf]. Pursued continuously, such conversations help to ensure regulatory compliance. This approach holds a key place in the PSA's supervisory strategy as a desired and prioritised mode of working. The discussions are respected by everyone concerned and established as a basis for supervising that petroleum activities comply with the regulations.*

Dialogue, however, was also presented as being a form of reaction to violations

> *As a form of reaction to violations, dialogue is utilised primarily for minor breaches of the rules or when the position is likely to be regularised in the near future. More formal and statutory responses available to the PSA … include orders, halting activities and coercive fines. The PSA assesses in each case which sanction will best return the relevant activity to compliance with the regulations. … Sanctions can be escalated, with stronger reactions utilised if the initial response fails to have the desired effect.*

Sanctions could be escalated if dialogue did not lead to improvements. The PSA may impose statutory sanctions if it did not find the outcome of dialogue to be adequate. Representatives from the PSA underscored that they seldom used coercive fines, orders and shutdown of operation as reactions to nonconformities unless there were serious breaches or immediate danger of major accidents. As we see it, this introduces a power asymmetry into the PSA's conception of dialogue. The

PSA pointed out that it had bigger sticks at its disposal if dialogue did not produce results that were acceptable to the regulator. It also illustrated some of the ambiguity and paradoxes of dialogue. Dialogue was presented both as an ongoing process and as a distinct reaction to violations. In the following paragraph we shall elaborate on the ambiguity of the dialogue based on our interview data.

5.2. The properties of regulatory dialogue

The PSA regarded dialogue (both oral and written) as the best tool for influencing regulatees because continuous interactions helped to ensure regulatory compliance. According to the PSA and stakeholders in the enterprises, it gave the companies the opportunity to be innovative in operations, give feedback to the authorities, and to contribute to the learning of both the regulatee and the regulator. An overall trust in the companies and their will to improve safety underlied the use of dialogue. During our focus groups at the PSA a supervision coordinator underscored: *We have trust in the companies, but it is not blind or naïve* (I2, PSA). Besides, this officer elaborated on the different roles of the interlocutors.

> *No one gives away everything about themselves. It is a ritual in which both parties have their specific roles to play. And there are some limitations to this [interaction] (I2, PSA).*

The word ritual, as we interpret it, was used to describe a property of the dialogue and how the parties engaged in impression management during encounters. Asked about properties in the regulator-regulatee relationship, officers at the PSA came up with three crucial dimensions by describing dialogue as *formalized, restricted and ritualized.* These terms appear as a self-contained cluster of implicit meanings, and how they were internally related were not altogether clear. Officers elaborated on this by emphasizing that they refrained from giving advice during telephone conversation or other informal encounters. At face-to-face encounters during supervision, the dialogue was framed and they followed a formalized script where the roles were defined beforehand. The procedures were also formalized and there would often be a written report that would be made public afterwards. This indicates an (implicit), specific interpretation of the term dialogue, and that this operationalisation of the term dialogue therefore, from the PSA's position, differs from a more common-sense interpretation of dialogue as informal talk and the exchange of information. It was underscored many times by the interviewees at the PSA that as regulators they were reluctant to approve specific solutions and so let responsibility for this remain with the enterprises. Another reason was to avoid being confronted with such decisions at future audits and investigations. Here they voiced concerns that if they were to provide detailed advice and approve specific operations and that these were found to be unsafe at an audit, the regulator would become the responsible part instead of the particular regulatee. An offshore manager described in more detail how they made sense of dialogue in practice.

> *We see that we can improve the dialogical aspect of these dialogue meetings. …there tends to be a lot of power point presentations from both sides rather than a dialogue. (I1, Operations Manager, Operator)*

This statement, as we see it, indicates that the interviewee's understanding of dialogue was at odds with how the regulator and regulatees interacted during dialogue meetings. Power point presentations were a way of structuring a dialogue and of ensuring that some written documentation of the dialogue was produced. There were, however, some downsides to relying on a technology that highlighted some topics and omitted others from the agenda. On behalf of the company, he also voiced some desires:

> *We would have liked to have an informal dialogue where we really can talk openly about our challenges without risking that it comes back as a regulatory activity from the PSA and is used against us (I1, Operations Manager, Operator).*

According to the representatives from the PSA, however, the formal style of the dialogue was related to the PSA's definition of supervision as comprising all contact between the regulator and the regulatee (oral and written). Our interviewees at the PSA underscored that they, as regulators, only acted on decisions that were documented. This quote brought to the fore a dilemma related to conducting dialogue under asymmetrical power relations. The company would have liked to talk more informally with the PSA. However, if they spoke frankly and revealed dilemmas and challenges, then the PSA might initiate regulatory actions.

We would like to highlight another important finding providing examples of how the regulatees exerted power and resistance. PSA officers and enterprise managers and employees recounted narratives about postponing and withholding information, delaying the implementation of measures or refusing to deliver internal documents. A safety representative commented on the staged encounters between regulator and regulatee.

> *Every time we are in contact with the PSA, it's like being visited by ten mothers-in-law, you have spring cleaned everything! … but it does not reflect everyday life. (I3, Safety Representative, Operator)*

In our view, the metaphor of being visited by not one, but ten mothers-in-law, highlighted that the enterprise made a substantial effort to present a 'perfect' façade, and engaged in impression management in their encounters with the regulator. Another interviewee mentioned how they talked about the PSA in enterprises before their scheduled visits.

> *Some people, when they hear the word PSA, start sweating, whereas others shout 'hooray, we need them!' The first is like the word auditor or regulation in general; damn, now they are coming looking for something. They are not here to confirm that everything is all right. You are therefore afraid of not having 'done your homework', or are scared of something being revealed, or of getting one of those infamous orders or deviations. In the second, people are pragmatic and say, 'wow, here we can actually get some help, because the PSA can, if it does not give us directives, provide us with input on how to proceed, which is my experience.* (I4, Supervision Coordinator, New operator)

This quote clearly shows, as we see it, that people in the enterprises held different opinions on the threats and opportunities associated with a dialogue with the PSA, and that the arrival of the regulator could awake strong feelings. Some were worried and concerned that the PSA would act as an 'auditor' looking for faults and non-compliance. This relates to the more traditional role of regulators as the 'police', within a control and command model. Others talked about the regulator as a 'partner' and collaborator in improving operations and increasing safety. We propose that this quote brings centre stage two contrasting dicourses on regulation; control and command, and co-generative learning through dialogue. These different interpretations of regulation influenced the interaction between regulator and regulatee. This could give the regulator an incentive to engage in impression management to make the regulatees lower their guards and exchange information more openly. In the following section we will analyse other 'channels' where the PSA also conducted dialogue.

5.3. Sensegiving as a means to influence the companies' framing of HSE problems

A PSA official summarised what was essential to the improvement of safety in these words.: *It is all about structural [aspects], planning of work operations, organizational aspects, MTO [man, technology, organization] issues* (I1, PSA). She elaborated on these statements by explaining that a narrow focus on the individual personnel involved contributed little to risk reduction. We found, in our analysis of a strategic selection of accident reports issued by the PSA, that event sequence descriptions were

mostly 'de-individualized', i.e. individuals did not figure as grammatical subjects. Nonconformities were framed as deficiencies of the safety management system rather than individual violations. These findings can be illustrated by an excerpt from the PSA investigation report on two interrelated events at the Eldfisk complex between 6 and 8 August 2014 (PSA, 2015). The first event was an unplanned emergency shutdown caused by the combination of a technical failure of an electronic component and a design error. The second event was an oil spill caused by a blowdown valve being incorrectly left open when restarting production after the emergency shutdown. The PSA identified eleven nonconformities in this investigation. A nonconformity is an observation which the PSA believes shows regulations have been breached. The following excerpt illustrates how they described the nonconformities [chapter heading from the report].

> **7.1.3 Safety clearance when restarting production**
> **Nonconformity**
> Inadequate safety clearance of the conditions for production start-up after the ESD.
> **Grounds**
> The decision to initiate work on resuming production was taken without a systematic verification that the facilities were gas-free and that potential ignition sources were under control as specified in the procedure for starting up after a yellow ESD /14/.
> **Requirement**
> Section 30 of the activities regulations on safety clearance of activities.

In this description the PSA employed a number of rhetoric means to frame the problem as a system deficit rather than a human error. Individual people did not figure as grammatical subjects. Evaluative terms and expressions were kept to a minimum. The safety clearance was characterised as 'inadequate', in the sense that it did not conform to the requirements stipulated in the regulations. These findings lead us to propose that the PSA used sensegiving to influence how regulatees framed their HSE challenges. The PSA framed the problems as system deficits rather than human errors. The company was induced to accept and adopt this framing in its reply, unless it was able and willing to provide a convincing argument for a different framing. The PSA attempted to use the "soft power" of dialogue to replace the common discourse on human error with a discourse on system deficits.

5.4. Power and identity at play

Identity was, as we see it, also linked to reputation. The significance of the industry being well-regarded was underscored in an interview with the Director General of the PSA, Anne Myhrvold in the PSA's magazine: "The heart of a good reputation is an honest, responsible and open industry which operates safely" (PSA, 2017 Dialogue no. 1, 2017, p. 6). She emphasised that it is not a goal of the PSA to secure the petroleum industry's good reputation. "But it'll acquire esteem by working safely. Since we work for the safest possible activity and continuous improvement, we're indirectly a driving force for a positive standing." This illustrated that the PSA also exercised power by granting players and the industry the identity of performing safe operations and of being destined to become a world leader in HSE (White paper 12, 2005-2006 and interview with the Director general PSA). Our PSA interviewees said that the in-house reputation of the regulatee rarely was on the agenda but that the enterprises and the media were very interested in this topic. At an industry level, a good reputation was a precondition for gaining access to ecologically vulnerable arctic environments. Enterprises had, therefore, been known to request the combination of individual violations into larger categories, to reduce the total number of violations – "to five instead of ten", for example. This could be seen as being an act of resistance, where player representatives tried to negotiate with the regulator, to obtain a lower number of violations to protect their reputation, because they knew the PSA would make this information public. The response to such a request would be negative, as the PSA did not negotiate sanctions and violations. Such negotiations were not part of the dialogue.

According to our informants at the PSA, the power of the PSA was rarely on the agenda. They, however, provided examples in the interviews that showed how they actually exercise power. This was through imposing sanctions, but also in indirect ways. A qualified operator must for instance obtain consent from the regulator at the important milestones, before carrying out an operation. Such consent is a prerequisite for operating on the Norwegian Continental shelf (PSA, n. d. About Consents). Obtaining such consent implies that the regulator has confidence in the operator and in that the operation will be carried out in accordance with the consent application. Indeed, the interviewees from the PSA talked about the importance of gathering detailed knowledge about the enterprises and indicated that this differs from how other national inspectorates and petroleum safety authorities in other countries operate. Accordingly the PSA acquired a lot of information about the players, even before they were licensed to operate. The regulator could, as a worst-case scenario, also promote the withdrawal of a license. The interviewees acknowledged that this was part of their power base and labelled it as a sort of 'implicit power'.

Another example of power in play had to do with an operator who had repeatedly challenged the PSA in association with an application for consent for well design, integrity and construction. Drilling is a cost-intensive operation, often performed under time pressure and performing the role of 'watch dog', PSA officials had discovered that the proposed design had a number of weaknesses which could pose risks and potentially lead to a major accident. Therefore, after several rounds of dialogue, they decided to put this issue on the agenda as a generalized case in one of the arenas in which the regulator meets with decision-makers from enterprises, for a discussion about robust well design. The PSA, in this way, engaged the players in a discussion about the potential risks and whether other players should be permitted to apply this new practice. This process contributed to the development of a shared understanding and the conclusion that the practice involved too many risks. The petroleum industry is characterized by a high degree of employee mobility. We were told by PSA officers that shared visions will, therefore, only last a while, being lost when new actors and players take over the involved roles. Different groups of interviewees from the PSA and the enterprises praised the tripartite arenas and their contribution to insights into different mindsets, shared visions, occasional disagreements and construction of a common identity.

5.5. Identity of the players in investigation reports

Serious accidents and incidents had the potential to change the identity of an enterprise and even the whole industry. Such occasions also provided the regulator with the opportunity to influence the identity of an enterprise and the strategies the enterprise uses to build its identity. We will now present two examples that illustrate how the PSA communicated about the identity of two enterprises that were involved in serious incidents. The PSA incident reports and the correspondence from PSA to the enterprises were public documents, which could be downloaded from the PSA homepage.

The normal procedure was that the PSA, after an accident or incident investigation, sent the investigation report to the operator with a covering letter. The covering letter to the operator started with the summary of the event, then stated the observations and requested a response from the operator. The following excerpt was taken from the covering letter following the investigation report on the incidents on Eldfisk on 6–8 August 2014 (PSA, 2015).

> The report from our investigation is attached. Several breaches of the regulations of a technical and operational character have been identified. […]

> The report specifies identified nonconformities, and we would request a description of how these will be dealt with. We would request that your response particularly reflects on lessons learnt from the operational conditions identified in the report.
> The report also contains observations and comments on conditions with a potential for improvement, and we would request your assessment of these conditions.
> We would ask you to respond to this letter by 15 September 2015. We also request that this letter and report are made known to union officials, including the safety delegates.

The PSA requested a response from the operator in the form of 'a description of how [nonconformities] will be dealt with', the operator's reflections on 'lessons learnt from the operational conditions identified in the report', and an assessment of observations and conditions which have the potential for improvement. These requests could not be put into action without further analysis and deliberation. We therefore suggest that the operator was forced to enter into a dialogue with the PSA under the conditions specified by the regulator. One of these conditions was that the operator had to provide its own assessments of the observations stated in the report, and identify appropriate actions based on these assessments. This request did not contain explicit statements about the identity of the operator as we interpret it. However, much was revealed by implication. The request made sense only if it was assumed that the operator was capable of analysing the event and of identifying and implementing suitable improvements. The PSA therefore offered the operator a confirmation of its identity as an organisation capable of learning from its incidents. This identity, however, was contingent on the operator's capacity and willingness to respond to the request in a productive manner. This contingency may be viewed as a source of power inherent in the nature of the dialogue and imposed on the operator by the PSA. We propose that the dialogue strategy applied by the PSA may be termed 'conditional sensegiving'.

A study of five other PSA investigation reports confirmed that the contents of the investigation report and cover letter cited above, were representative of PSA's communication to enterprises about serious events. If the PSA found reason to believe that an enterprise had failed to learn from its incidents, the dialogue could actually be transferred to a higher level in the company. Such a situation occurred after a gas leak on Gullfaks B in 2010 (PSA, 2010. Gas leak on Gullfaks B 4 December 2010), and the PSA reacted to the gas leak by writing a public letter directly to Executive Vice President Øystein Michelsen in Statoil, one of the major players on the shelf (now Equinor). The PSA expressed a concern that improvement processes pursued after earlier serious incidents in this enterprise, appeared to not be having an effect. Mr. Michelsen was asked to account for the following issues:

1. What view does the company take of the deficiencies identified by the PSA's investigation in the light of current and completed improvement activities in the company?
2. What adjustments to current improvement activities does the company consider necessary?
3. What view does the company take of today's planning and execution of safety-critical work operations on Gullfaks?
4. To what extent does the company consider that the underlying causes of the incident have been identified and assessed when implementing measures?
5. Which specific follow-up action might the company be planning to take in order to ensure that improvement measures are effective on the individual installations?

This request clearly implied that the enterprise, in the view of the PSA, had failed to learn from some of the incidents in an effective manner. The request therefore did not offer the operator a confirmation of its identity as an organisation capable of learning from its incidents. The request, however, only made sense if it was assumed that Statoil had a capacity for second order learning, i.e. learning how to learn in new and more effective ways. The PSA offered Statoil a confirmation of its capacity of second order learning, this being contingent upon Statoil's capacity and willingness to respond to the request in a productive manner. We therefore consider this to be another example of conditional sensegiving in the regulatory dialogue. This example is probably unique, but it indicates that the strategy of conditional sensegiving through dialogue could be maintained even when the PSA escalated its reactions.

We discussed the analysis outlined in this section with PSA officials, in our second focus group interview. The interviewees confirmed that the analysis made sense to them. They also pointed out that using dialogue in this manner had, on several occasions, led enterprises to make improvements that went beyond the minimum requirements of laws and regulations. If the PSA had used a mandatory [formal] order as a reaction, then they would have had to limit it to the actions that were strictly required to achieve compliance.

6. Discussion

Our study has focused on principles and practices of dialogue as a vital policy instrument in the regulation of HSE in the Norwegian oil and gas industry. We shall argue that regulation based on dialogue might seem to be a contradiction in terms. It was, however, flagged both on the website of the PSA and during the interviews, that enterprises were enrolled as the responsible part for carrying out safe operations through this mode of working. Exploring narratives and interpreting processes of making and giving sense to what dialogue implied in encounters between regulator and regulatees, illustrated ambiguity, paradoxes and tensions.

6.1. The qualities of the regulatory dialogue

We identified different interpretations of dialogue as a regulatory strategy within a regulatory regime based on responsive regulation. PSA officers underscored the particular features of the dialogue by the terms formalized, restricted and ritualized. Representatives from regulatees expressed a desire for more informality and open discussions instead of the window dressing that took place in companies prior to an encounter with the regulator. These contrasting narratives bring to the fore some interesting and paradox-like aspects of the dialogue (Section 5.1 and 5.2). The dialogue granted autonomy and accountability to the regulatees. The autonomy had to do with diagnosing HSE problems and choosing appropriate measures. The reluctance on the part of the PSA to engage in discussions about actions and specific solutions empowered the enterprises and could thus be seen as an incentive for creativity, innovation and learning. This could potentially be a productive force and contribute to new solutions beyond a specific symptoms. On the other hand, it could also be regarded as a plausible strategy for handling the increased number of new (small) players.

In theories on regulation the asymmetrical power relations between those in power giving sense and those taking sense - here the regulator and the regulatees - have been highlighted. In the analysis we underscored how the regulator could impose sanctions in cases of violations, but also execute power during processes of license application and of consent for important milestones during an operation. The power asymmetry may thus entail a risk that companies engage in excessive window-dressing and withholding of information, or that they will use juridical means to keep the regulator at a distance. However, our analysis goes beyond a simplistic interpretation of power asymmetry and illustrates more complex and discursive aspects of power; how regulatees had self-regulating and learning space to manoeuvre, and might challenge the regulator during processes of application, consent, inspections and audits. In short, the dialogue was infused with paradox-like encounters and took on many different modalities of power (Black, 2002).

6.2. Sensesharing as part of a regulatory regime

The analysis illustrates that dialogue was used in regulatory conversations in interactions with the stakeholders, to achieve shared visions, learning and to find new ways to improve the safety of operations (Section 5.4). We, based on this result, propose that the theoretical framework of sensemaking, sensegiving and sensetaking is expanded to include the notion of *sensesharing,* as an important part of this regulatory regime. By introducing the term sensesharing we want to move on from a simplistic view of giving and taking sense. Instead we highlight how meaning is co-created in social interactions in order to jointly produce a mutually accepted outcome. Different types of tripartite arenas served as discussion forums, in which stakeholders within the industry could exchange viewpoints and have formal and informal discussions. We identified instances where the players challenged the regulator and demonstrated resistance, such as in the proposal for a new well design, and agreed on a safe solution. Important prerequisites for sensesharing was the openness of the PSA, the publicly available texts and correspondences on their website, trust and existence of tripartite arenas.

6.3. Dialogue as a reaction to non-conformities

The PSA presented dialogue as its preferred form of reaction to non-conformities (Section 5.1, 5.3 and 5.5). At the same time, the PSA claimed that they would escalate their reactions if dialogue did not lead to compliance with the regulations. The PSA had at its disposal an enforcement pyramid ranging from persuasive means that allowed the firms to confirm their identity as serious actors, via deterrence, to the possibility of incapacitation. This, and the preference for dialogue as a mode of working, corresponds closely to the responsive regulation approach advocated by Ayres and Braithwaite (1992). The application of conditional sensegiving can be seen as an innovative way to encourage the regulatees to internalise regulatory goals. These considerations lend some theoretical support to the claims of the PSA that their extensive use of dialogue as a form of reaction could be more effective than a more frequent application of deterrence. This theoretic support is, however, contingent on sufficient frequency of interaction between the regulator and the regulatee and the ability of the regulator to obtain the necessary information to judge the need to escalate their response. The costs and planning times related to offshore inspections could pose a challenge in these respects.

6.4. Sensegiving as a source of power

Parts of the literature on sensemaking and sensegiving build on a view where management gives sense and the workers take sense (Gioia and Chittipeddi, 1991, Corvelle and Risberg, 2007). Our analysis identified more complex and asymmetrical processes of sensemaking, sensegiving and sensetaking (Sections 5.3, 5.4, and 5.5). We are now in a position to formulate two hypotheses of how dialogue can serve as a source of regulatory power in the context of the Norwegian oil and gas industry. This is based on the examination of PSA investigation reports and accompanying cover letters. Firstly, the PSA used a *sensegiving* strategy to influence how regulatees framed their HSE challenges. The PSA, in their investigation reports, tended to frame HSE problems as system deficits rather than individual personnel errors or violations. The companies were, therefore, induced to accept and adopt this framing in their replies, unless they were able and willing to provide an argument that could support a different framing. Secondly, we found that requests to enterprises in cover letters only made sense if it was assumed that the enterprises were capable of analysing the events and of identifying and implementing suitable improvements. The PSA therefore offered the enterprises a confirmation of their identity as organizations capable of learning from incidents. The enterprises, on their side, could verbalize their sensetaking by responding in a positive manner and formulating action plans. This confirmation of identity was contingent to the capacity and willingness of the enterprises to respond to the request from the PSA in a productive manner. We labelled this *conditional sensegiving*. In this context, this refers to a communication process in which one actor *A* offers another actor *B* a desirable identity, under the condition that *B* conforms to a set of preconditions specified or implied by *A*. *B* may perceive this as "an offer you can't refuse", in the sense that a failure to comply could have a detrimental effect on *B*'s reputation. From a power perspective this might seem somewhat paradoxical

A possible effect of the way the PSA applies dialogue may be that it helps to create an interpretive community with the regulatee that emphasises HSE problem solving and at the same time de-emphasises juridical issues related to the application of regulations. This hypothesis is based on the finding that the PSA in their cover letters following accident investigation reports, asks the regulatees to describe how they will deal with the findings in the investigation report. Such requests call for a problem-solving effort rather than a juridical response.

6.5. The power of dialogue in the PSA regime

In Section 2.1 we distinguished four different perspectives on power. We shall now elaborate our claim that the dialogue between PSA and regulatees is infused with power by giving examples of how the dialogue involves mechanisms of power related to all four perspectives:

- *Power in action:* In dialogue following incident investigations and audits, the PSA leaves it to the regulatee to identify corrective actions. In this way, they probably build a stronger *psychological and social commitment* within the companies to implement the actions and make sure they are effective, compared to a situation where the regulator identifies the corrective actions and issues a mandatory order.
- *Power as a resource:* The enforcement pyramid gives the PSA a mandate to impose a broad range of sanctions on the companies. This can be a formidable power resource, even if it is used sparingly. In addition, the publishing of audit and investigation reports implies that the PSA can have an impact on the reputation of regulatees, even if the use of this power resurce is not formally among the policy instruments available to the PSA.
- *Power in collaboration and networks:* The PSA engages extensively in tripartite collaboration, by establishing their own arenas and by participating in arenas established by others. This can help to promote a common understanding of the risk picture and the need for improvements, and thus make the regulatee internalise regulatory goals. Over time, the regulatory dialogue may create *interpretive communities* (Black, 2002), e.g. a community oriented towards HSE problem solving ranther than juridical argument.
- *Power in symbols and discourse:* In their investigation reports, the PSA consistently framed incidents as the outcome of system deficits, inducing the companies to adopt a similar discourse in their replies. The PSA thus promoted a system-oriented discourse on accident causation, in contrast to a discourse centered on human error.

We suggest that *it is easy to underestimate the impact of the PSA as a regulator if one considers only the use of coercive power in the form of statutory sanctions imposed on the regulatee*. In accordance with Ayres and Braithwaite (1992), we also suggest that *the availability of coercive power may be a precondition for the way the dialogue functions today*. It can, for instance, have a high reputation cost for a company to withdraw from the dialogue with the PSA. If this were not the case, then some companies might choose not to respond to dialogue initiatives from the PSA.

6.6. The future of dialogue in the PSA regime

We have not noticed any substantial changes in the way dialogue is applied by the PSA during the time period covered by this study, i.e. 2009 to 2019. The regulatory regime, despite challenges, controversies

and ambiguities, seems to have strong support both within the industry and among the trade unions (Lindøe et al., 2014:part III, Engen et al., 2017, Engen, Lindøe & Hansen 2017, Forseth and Rosness, 2017). It has been debated (and still is) how this regime would work under changed framework conditions, e.g. under the consequences of the latest downturn, the pressure toward harmonizing rules and standards, and the influx of new players (Engen et al., 2017). The labour unions have questioned whether the sanctions from the PSA were strong enough and whether the PSA is taken seriously by the petroleum industry. The labour union IndustriEnergi voiced concerns about an increasing number of incidents and accidents in the wake of cost-cutting in the industry.

In response to such concerns the Office of the Auditor General in Norway conducted an investigation of the PSA. The aim of the investigation was to assess whether the PSA's supervisory practices protect health, safety and environment in connection with petroleum activities in accordance with parliamentary decisions. The scope was limited to the legal (i.e. statutory) responses that the PSA has at its disposal and focused to a lesser extent on non-codified responses such as dialogue and meetings. The investigation thus did not explicitly consider the appropriateness or effectiveness of dialogue as a reaction to nonconformities. The report from the Office of the Auditor General (2018-2019, p. 8) concluded that the PSA is too reluctant in using rigorous sanctions, and does not verify thoroughly that the players comply with orders:

- In the cases that have been investigated, the PSA's supervisory practices had a limited impact on the companies' follow-up of health, safety and environment issues.
  - Individual instances show that the PSA's methods of supervision do not contribute to the detection of serious safety concerns.
  - The companies do not always rectify regulatory nonconformities following notification, and the PSA does not always perform sufficient follow-up to ensure that nonconformities are rectified.
  - The PSA is slow to implement strict sanctions when these are needed, and does not do a sufficiently thorough job of investigating whether the companies have complied with orders
- In general, the PSA does a good job of following up incidents and reports of concern.

It is beyond the scope of the present study to examine the effects of this report on the regulatory practices of the PSA. However, we may note that while the report called for more frequent use of rigorous legal responses and more frequent verifications, it did not call for *less* dialogue, for instance in the follow up of incidents and revisions. It remains to be seen whether more frequent use of formal sanctions will affect the qualities of dialogue, for instance by making the companies engage in more impression management or meet requests from the regulator with juridical responses rather than problem-solving efforts. Increased reliance on formal sanctions may also cause the regime to change its character and abandon the opportunity to play on identity in the same way as today.

6.7. Limitations and need for further research

The data sources of this study are restricted to a single regulator, the PSA Norway, and to the time interval covered by the data sources, 2009 to 2019. The Norwegian oil and gas industry is highly dependent on a good reputation for gaining political acceptance for exploration and production in ecologically vulnerable areas. The Norwegian state controls the allocation of licenses. The PSA can influence the allocation of licenses by reporting regulatory nonconformities to the relevant ministry. This leaves the state with a very powerful policy instrument, which can serve as a source of power even if used sparingly. Moreover, the Norwegian oil and gas industry as a whole has a strong interest in maintaining the identity of being made up of capable and responsible actors, so that actors can gain access to ecologically vulnerable environments. Our findings on the power of dialogue should be interpreted in this context. It is not obvious that dialogue can function as a similarly effective policy instrument in an industry that is less dependent on a strong reputation or in a setting where the regulatory authority does not have stronger reactions at its disposal. Terminating dialogue with the PSA is, furthermore, not an option for the enterprises, as this would lead to the use of stronger reactions and could potentially threaten the enterprise's reputation. Just how much of the power of dialogue depends on these contingencies remains an issue for further research.

The style of dialogue and the appropriateness of dialogue also seems to be related to two other aspects of the regulatory regime as it relies extensively (but not exclusively) on goal-oriented regulations (Bang and Thuestad, 2014). It is the responsibility of the enterprise to translate goal-oriented requirements into, for example, adequate prescriptive rules and construction criteria. Using specific mandatory orders as a common reaction to regulatory breaches could undermine this principle. Besides, the regime is based on enforced self-regulation. The use of dialogue as a reaction can be seen as being a means for the regulatory authority to perform responsive regulation and to avoid intruding into or taking over the role of the enterprises as self-regulators. Issuing a mandatory order could lead to the regulator being perceived as taking responsibility for finding an adequate solution to the identified HSE problem. This would conflict with the principle that it is the companies' responsibility to identify and solve their HSE problems. Enterprises that have adapted to goal-oriented regulations and enforced self-regulation, may also be in a better position to respond productively to dialogue, as they have been stimulated to develop their capacity to translate high-level requirements into specific action and to diagnose their own HSE challenges. Further research is required to determine how dialogue as a policy instrument would function in a regulatory regime that relies more on prescriptive regulations and/or relies less on enforced self-regulation. It could also be of interest to explore the dialogue between the stakeholders present in tripartite arenas. There may be less asymmetrical power relations here than in encounters between regulator and regulatee. There are probably other forms of dialogue between regulator and regulatees developed within different framework conditions and therefore with a different trajectory. To compare the use of different mechanisms of power and features of the dialogue between different regulatory regimes is an interesting future research agenda.

7. Conclusion

We have explored the use of dialogue as a strategy for the regulation of HSE within the Norwegian oil and gas industry. Our analysis illustrates how the PSA and the regulatees give sense to what the dialogue implies in theory and practice, by analysing texts from the PSA website and publications over a ten-year period, a selection of investigation reports, and data from focus group interviews. The PSA flagged dialogue as a desired and prioritized mode of working, but also as one among several forms of reaction to nonconformities. The dialogue, however, was formalised, restricted, ritualized and asymmetrical, and some enterprise managers expressed a desire for more informality. Some enterprise managers argued that power asymmetry and impression management had an impact on the quality of the dialogue.

We propose that the PSA used a sensegiving strategy to make the regulatees frame their HSE challenges in terms of system deficits rather than human error. The PSA also offered the enterprises confirmation of their identities as organizations capable of learning contingent on the capacity and willingness of the enterprises to respond to the request from the PSA in a productive manner. We labelled this mechanism 'conditional sensegiving'. The application of conditional sensegiving encouraged the regulatees to internalise regulatory goals. The PSA also relied on tripartite arenas as a means to create a (temporary) shared vision and safe operations. We coined this 'sensesharing', highlighting how meaning is cocreated in social interactions and can involve negotiations. The dialogue involves a broad range of mechanisms of power, and it was situated in a regime of responsive regulation. It is therefore

easy to underestimate the impact of the PSA as a regulator if one considers only the use of coercive power in the form of statutory sanctions. The philosophy of this regulatory regime, how it works and what keeps it together, are influenced by the Norwegian model of working life and by the PSA's reliance on goal-oriented regulations and enforced self-regulation. It is also influenced by historical and local features of the petroleum industry, such as its need for maintaining a reputation as capable and responsible actors, in order to gain access to ecologically vulnerable environments.

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