The relation between trust, leadership, safety and culture

A comparison of Seawell employees

on the UK and Norwegian Continental Shelves

Tove Erna Belland

Master of Science in Change Management

University of Stavanger, Norway

2006/2008

UNIVERSITETET I STAVANGER

MASTERGRADSSTUDIUM I
ENDRINGSLEDELSE

MASTEROPPGAVE

SEMESTER: Våren 2008 (kull 2006-2008)

FORFATTER: Tove Erna Belland

VEILEDER: Jorunn Elise Tharaldsen, IRIS

TITTEL PÅ MASTEROPPGAVE:

The relation between trust, leadership, safety and cultures
A comparison of Seawell employees on the UK and Norwegian Continental Shelves

EMNEORD/STIKKORD: Culture, trust, leadership, safety

SIDETALL: 76

STAVANGER 160608 Tove Erna Belland
DATO/ÅR

Abstract

It is assumed that the world is getting more and more interconnected and that the business world is becoming increasingly global. To what extend this evolution will influence values and practices in organizations and leadership, are an interesting question. Trust is, whether it is inter personal- or in regard to organizational work practice, important in areas where individuals have responsibility and need to perform in a reliable way. Trust is in most safety literature assumed to be beneficial for safety, and distrust detrimental. These assumptions make intuitive sense, but have been challenged in research in association with trust and safety performance. Conchie and Donald's (2007) Trust model is valuable in understanding trust and safety. Transformational leadership style is believed to have the most affective results in developing trust. In regards with safety culture, research has found that a transactional leadership style also may a positive effect.

The objective of this study was to examine and understand cultural similarities and differences related to trust and leadership and its anticipated influence on organisational safety performance. A comparative study of safety and organizational culture has been performed on the UK and Norwegian Continental Shelves within two phases. The main project uses a combined methodological approach. While data gathered in the first phase are of a quantitative character (survey data 2007), second phase data consists of qualitative data (focus group interviews and key informant interview). The quantitative data comprises a questionnaire survey which included Seawell employees working within well services in UK and Norway completed in 2007. The aim of phase two in general is to achieve a deeper understanding of the quantitative findings in phase one. In my study I've made a selection of relevant issues from the main projects and my main goal has been to examine the relations between trust, leadership, safety and culture. *My research questions are: 1) How may cultural aspects influence on the perception of trust, safety and leadership? 2) How is trust related to safety? 3) Are leadership styles different across shelves, and how may this influence trust and safety aspects?* My data is of a qualitative character and was collected through focus group interviews and a key informant interview in UK and in Norway. A meaning coalescing method (Kvale, 1997) was used to reduce and analyse the qualitative data.

The overall results showed an organization with high compliance towards safety and high trust in workmate and management commitment to safety. Cultural aspects were found to influence on the perception of trust, safety and leadership. The trust the UK informants expressed towards their supervisors appeared to be of a different kind than the trust Norwegian informants expressed towards their leaders. Cultural differences related to Power Distance and Assertiveness may be an explaining factor when understanding these differences.

In relation to trust and safety both countries appear to have a general agreement about both the upsides and downsides to trust, and the importance of functional trust and functional distrust in relation to safety. The leadership style most suitable to increase trust and distrust seem to be a combination of both transformational and transactional leadership styles. In addition, contextual and cultural differences should be taken into consideration when further improvement of the organizational safety performance is to be developed.

Preface

This thesis completes a Master in Change Management at the University in Stavanger, Norway, started during the fall 2007 and finished in June, 2008. I have participated in a project at International Research Institute of Stavanger (IRIS). Jorunn Elise Tharaldsen is the project leader and my teaching supervisor. The research is related to a project: A comparative study of HSE culture on the Norwegian and UK Continental Shelves. My research questions have been based on an interest in cultural similarities or differences in relation to trust and leadership. To be able to study these issues within the HSE-approach in the Oil and Gas Industry has been a new and valuable experience.

Without a lot of help from different people this Master theses would not have been possible. First; Jorunn, my supervisor teacher and mentor; thank you so much for the excellent guidance, the challenges, the reflections, the new knowledge and last but not least all the support you have given me through this semester. Thank you for providing me with an office, including me at IRIS, for sharing your HSE-data, and for taking me to Aberdeen. Secondly; Seawell (representative) employees and informants in Stavanger and Aberdeen; I am grateful for being able to participate in the HSE-project, the workshops and accomplishing the interviews. To Glen; you have been great with the girls and me. Without your belief in me, and being a housewife and a housefather for the last months, I would not have come this far. Lea and Naomi; I miss spending time with you, and I will make it up to you. Thanks for being so understanding and good. And to my friends; thanks for all the different kinds of help and support; for babysitting, correction of my English writing, shoe-shopping for the girls, telephone conversations, computer help, discussions over lunch at IRIS or the University, and much more.

Stavanger 16.6.08

Tove Erna Belland

Contents

1. Program Workshop Aberdeen

2. Agenda Workshop Stavanger

3. Questions Focus group interviews

4. Questions Key informant interview

5. Kopi av innsendt meldeskjema

6. Assurance of confidentialty

7. Taushetserklæring

1 Introduction

How cultural differences in the future may implicit the new democracy of globalization, is an interesting question. Will organizational and corporate behaviour become more similar, or will cultural differences be maintained? Most national and international companies comprise employees with different cultural backgrounds. The Oil and Gas Industry is perhaps one of the most global industries, and deals with companies and employees from nationalities and cultures all over the world. History, traditions and culture will most likely have an effect on the employees' values and performance (House, Hanges, Javidan, Dorfman & Gupta, 2004).

Leadership constitutes an important part of this picture and will most likely benefit from taking a global approach, with a cultural capability or sensitivity to cultural differences (Dickson, DenHartog & Mitchelson, 2003, House et al., 2004). Values and practices seem to be highlighted differently within various leadership styles, and national context may have a bigger influence than anticipated. Which leadership style is most suitable in the actual country, in order to develop trust and a strong safety culture is an interesting discussion in High Risk Organizations.

Trust is important in all areas where individuals have responsibility and need to perform in reliable ways. Within most relationships; whether it is inter personal- or in regard to organizational work practice, trust is necessary. Many books and articles are written about trust and trust relations from different perspectives and branches of science (sociology, anthropology, psychology etc.). Trust is a complex concept to comprehend, and the understanding and the context in which trust is used, vary widely. As a result of this, the theory of trust is still developing (Lewicki, Tomlinson & Gillespie, 2006). Cultural background may influence on how trust is perceived, and also how management relates to trust relations and safety behaviour.

Serious accidents like the Alexander Kielland accident in Norway, and the Piper Alpha accident in the UK in the eighties, lead to a major focus on safety offshore. How to prevent accidents in High Risk Organisations got an extended focus. One step in preventing accidents was to develop a strong safety culture. Trust, in the safety literature is recognized as an important factor in developing a good safety culture (Burns, Mearns, McGeorge 2006; Clark & Payne, 2006; Conchie, Donald & Taylor, 2006; Conchie & Donald, 2007; Conchie and Burns, 2008; Lewicki et al., 2006; Mearns

Merknad [j1]: Legg inn alle forfatterne her.

& Yule, 2008; Poortinga & Pidgeon, 2005; Reason, 1997; Tharaldsen, Mearns and Knudsen, 2008a). Most literature regarding trust and safety assumes that trust is beneficial and that distrust is detrimental for safety behaviour. Recent studies have questioned and challenged these assumptions. Some claim that distrust may actually be good for safety performance. Conchie & Donald (2007) has developed: Model of the functions of safety-specific trust and distrust, which explain the role of functional trust and distrusts in safety performance.

This research is part of a project accomplished as a collaboration between International Research Institute of Stavanger (IRIS), University of Stavanger (UiS), and University of Aberdeen. The project is called; A Comparative Study of HSE Culture on the Norwegian and the UK Continental Shelves (HSE-project). The research questions in my master thesis are extracted from this project, where the aim is accomplish a deeper understanding of the relations between trust, leadership, safety and culture.

The study is highly relevant in the field of safety research and the results may also be interesting for the management in Seawell and other High Risk Organisations. A cross-cultural perception of values, trust and leadership is needed and ought to constitute a fruitful perspective in international business. This research may also contribute to a further understanding of the functions and employees perceptions of trust and distrust with regard to safety performance. Leaders, especially within High Risk Organisations, may gain from using a combination of both transformational and transactional leadership styles in the development of trust and a strong safety culture.

1.1 Presentation of the HSE-project and research questions

A comparative study of the HSE-culture on the UK and Norwegian Continental Shelf started in 2007 with Jorunn-Elise Tharaldsen (IRIS) as the project leader. The main goal of the project is to make a comparative analysis of how HSE-culture is perceived by Seawell Limited employees on different platforms on both the Norwegian and UK Continental Shelves. More specifically, Seawell employees working within well service in Scotland (Aberdeen) and in Norway, have been compared on different dimensions related to HSE (health, safety and work environment), trust, and management commitment to safety and self-reported risk-taking behaviour (Tharaldsen & Mearns, 2007).

The HSE-project has in addition established a group consisting of management representatives, head safety delegates, HR and HSE representatives from both countries, a collaborating research team (IRIS; Jorunn Tharaldsen, University of Aberdeen, Prof. Kathryn Mearns and University of Stavanger, Prof. Knud Knudsen) In addition the project group was supplemented with two observers: The Norwegian Petroleum Safety Authorities (Øyvind Lauridsen) and the Norwegian Research council (Tor-Petter Johsen). The project is funded by the Norwegian Research Council and Seawell Limited Oil and Gas Company.

The comparative study (HSE-project) includes two main phases. Phase one includes a questionnaire survey (HSE-questionnaire) completed in 2007. The results of this phase will be taken into the company for further analysis in phase two. Phase two is a qualitative study where the employees' perceptions on the two shelves will be examined. Challenging and risky areas that need to be improved will be defined. Qualitative data collection will be completed in both countries. The aim of phase two is to interpret and understand the results of the HSE-questionnaire even further.
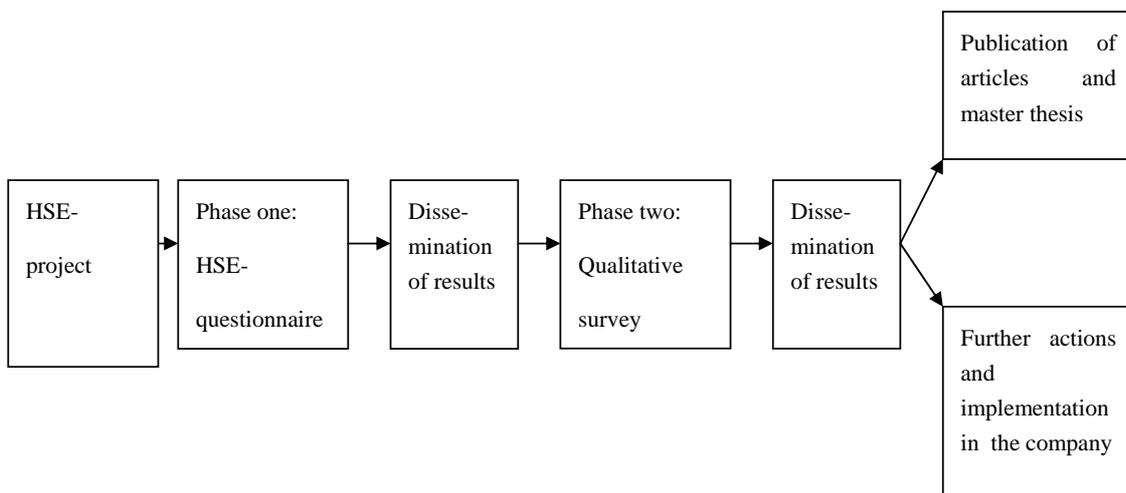
Figure 1: HSE-project Phase model

The HSE-project included participation of one master student (me) and my study contributes to phase two in the project. My study and research questions are extracted from the HSE-questionnaire results.

The research questions are:

1. How may cultural aspects influence the perception of trust, safety and leadership?
2. How may trust be related to safety?
3. Are leadership styles different across Shelves, and how may this influence trust and safety aspects?

1.2   Structure and demarcation

This master thesis is divided into five chapters: introduction, theoretical framework, method, result and discussion and conclusion. In order to answer the research questions a theoretical framework is developed in chapter two. This framework explains constructs like: cultural similarities and differences, the concept of trust, trust in relation to safety and different leadership styles.

House, Javidan, Hanges and Dorfman (2002) and House et al., (2004) has developed 10 cultural clusters who discuss similarities and differences within clusters of countries. These clusters may be valuable in understanding cultural differences between the UK and the Norwegian Continental Shelves. The two clusters focused on in this study are the Anglo cluster and the Nordic Europe cluster. The UK is a part of the Anglo cluster. Nordic Europe cluster constitutes Denmark, Sweden and Finland (House et al., 2002; 2004). Norway did not participate in the GLOBE study. However, the Scandinavian countries have many similarities and the Nordic Europe cluster will therefore be used as a reference frame in discussing the Norwegian results. The GLOBE cross-cultural study focuses on societies, organizations, values and practices in regard to different cultures and leadership. The study has in addition to a development of cultural clusters, studied leadership values and practices. The GLOBE leadership dimensions are not used in any of the measures in the HSE-project. The theory is however mentioned within the theoretical framework as a support for reflections about different leadership styles and leadership within different cultures.

The HSE-project focuses on dimensions related to practice and organization in the HSE-questionnaire. In relation to the qualitative study and the discussion it is however important to use the GLOBE clusters with caution. According to House et al., (2004) there are significant differences within clusters with regards to beliefs, values and

behaviour. The clusters may be too general and abstract, and it is important to have in mind that there are interesting differences also within the same country. Spangenbergen (2003, in Mearns & Yule, 2008) for instance investigated why Danish workers had approximately four times the lost time injury rate than the Swedish workers in building the Øresund Bridge. National differences between Danish and Swedish work-politics influenced employees' practices. This study show that even in countries like the Scandinavian countries that appear to be similar; there are subtle differences (Mearns & Yule, 2008). The world is complex and dynamic, cultures develop and change, and there are subcultures and individual variations within a culture – even within an organization.

To our knowledge the GLOBE study has not previously been combined and associated with trust and safety dimensions. Trust is a complex concept explained within different branches of science. In this study a psychological perspective is used in the understanding and explanation of the concept of trust. Trust is often seen as a core element in developing a strong safety culture (Reason, 1997). This study supports this point of view and acknowledges trust as an important factor in relation to safety. Leaders play a major role in developing a strong safety culture (Mearns & Yule, 2008). Different leadership styles may however influence trust and safety culture differently. The theory of transformational and transactional leadership styles will be reflected upon when trying to understand and interpret these issues.

Chapter three explain the methods used in the HSE-project. The aim is to answer the research questions through a combined methodological approach. The results from the HSE-questionnaire survey are presented in a table in chapter 3.2 in order to see how the methods and phases are intertwined. In order to answer the research questions a selection of specific dimensions from the HSE-questionnaire results were chosen. Two of the GLOBE dimensions (Power Distance and Assertiveness), two of the Trust dimensions (Trust in workmates, and Trust in Supervisor), and a Safety dimensional scale were extracted and highlighted for the qualitative study. Within Conchie and Donald's (2006a) Trust scale measure, two elements of the concept trust are utilized. These are cognition-based (trust in another's competence) and effect-based trust (trust in another's intentions). These dimensions are the starting point of this study.

Qualitative data was collected through focus group interviews and a key informant expert interview. The object is to answer the research questions through a collection of UK and Norwegian Seawell employees' understandings, perception and

points of views of trust, leadership, safety issues and national differences. Two workshops were completed in phase two of the study; one in Scotland and one in Norway. Ontological beliefs will affect the research design, the data reduction and data analysis. At the end of the chapter ethical issues, validity and reliability is explained.

Presentation of the qualitative study and a discussion of the results are performed in chapter four. Results from both phases will be combined in order to give valid and reliable answers. At the end of the chapter a reflection about leadership styles in relation to trust and safety culture is performed. Chapter five includes the summary and suggestions for further research.

The survey rest on a selection of data, and may therefore not give a complete interpretation of cultural differences in regard to trust, safety and leadership. If all GLOBE dimensions were used, a more complex understanding of the research questions would have been possible. It is also important to highlight that the discussion of the result is based on – at times – very general reflections, that there are complex variations within the results, and that my results are based on a specific sample of Seawell employees in the UK and in Norway. However, strength of this study may be related to the selection of (only) one company with employees coming from and working in two different countries. It may constitute a sound strategy for examining how corporate value and identity, which should be the same, may be interpreted differently because of contextual and cultural differences. Cultural differences may not only be linked to nationality, but also platform, crew and client specific (sub) cultures.

2 Theoretical framework

This chapter explains constructs like: cultural similarities and differences, different leadership styles, the concept of trust, and trust in relation to safety. An interesting question in regard to globalization is if organizational behavior will be more similar in the future, or still maintain cultural differences. A broad range of cultural variables may have an impact on organizational cultures. GLOBE cross cultural research aims to understand similarities between cultures and may provide helpful insights to executives facing global challenges (House et al., 2002; 2004). House et al., (2002; 2004) central theoretical understanding is that cultural artefacts will have an effect on organizations

and leadership. Different leadership styles have different influence on workers performance. Leaders may benefit from being sensitive to cultural values and differences, and taking a global approach (Dickson et al., 2003).

Trust is a central value, in most relationship, whether it is personal or within organizations. *"Organizational researchers and practitioners have acknowledge that trust in an important element of an affective organization and that it plays a central role in the coordination of social actors expectations and interactions"* (Cox, Jones and Collinson, 2006, p. 1123). The concept has however major inconsistency in how it is approached theoretically, how it is conceptualized, operationalized and measured (Seppanen, Blomquist & Sundquist, 2007; Lewicki et al., 2006; White & Eiser, 2006).

In most safety literature trust is seen as a positive element for developing a strong safety culture (Reason, 1997). Recent research by for instance Jeffcott, Pidgeon, Weyman, and Walls (2006) and Conchie and Donald (2007) question trust in relation to safety. Conchie and Donald (2006b; 2007) include distrust as a positive element in safety performance. Safety behaviour is believed to be related to the safety culture within the organization and leadership. The assumption is that: *"a positive culture leads to the workforce exhibiting safety behaviour however the relationship may well be reciprocal with safer behaviours leading to a more positive safety culture"* (Means & Yule, 2008). Different leadership styles seem to highlight different values (French & Bell, 1999). It is discussed to what degree national values and culture influence trust relations, different leadership styles and safety matters.

2.1   Culture and leadership

The business world, and especially perhaps the Oil and Gas Industry, are becoming increasingly global. There are major differences between some national cultures regarding values, beliefs, training, education and experience of the workforce. Stronger connections among different cultures increases interest in questions like; to what extent are human communities similar or different, and how will these aspects influence work practice and leadership? Will globalization lead to societies with more corporate values, or will cultural values in the future influence and have an impact on our behaviour? How these processes will influence safety performance in within different countries is an interesting question. To what extent national cultural differences and leadership

styles influence the perception of trust, and trust relations to safety performance is an unanswered debate.

Challenges and dissimilarities are not disappearing or diminishing. *"As economic borders come down, cultural barriers go up, presenting new challenges and opportunities in business"* (Javidan & House, 2002, p. 1). There are various definitions of culture among social scientists. Culture may be explained as: *"shared understandings made manifest in act and artefacts"* (Redfield, 1948 in House et al., 2004, p. XV). Culture usually refers to a set of parameters of collectives that differentiate the collectives from each other in meaningful ways (House et al., 2004).

House et al.,s (2004) GLOBE studies show that national values and cultures have an impact on content, structure and leadership behaviour and organizational culture. They claim that the greater differences between the cultures, the greater differences for organizational practice (House et al., 2002; 2004). Researchers argue that specific cultural traditions, values, ideologies and norms have a bigger influence on leadership style than structural factors between societies. Historical developments will influence the degree of co-operation, moral, and commitment to organizations, despite any economic or social similarities between nations. On the other hand researchers claim that some aspects of leadership are global, and universally accepted. Global managers need to have a cultural capability or to be sensitive to cultural differences (Dickson et al., 2003; House et al., 2002).

Means and Yule (2008) argue that in time cultural values will be more global. Individualism, the free market economy and democracy are global values. These are essentially Western values that are associated with the Oil and Gas Industry, and will most likely in time be global as the Oil business further expands. This does not have to mean an entire rejection of old values. Local cultures will to some extent influence and exist, but new global cultural values will develop. In their opinion new values will encourage individual choices rather than conformance with traditional local roles (Mearns & Yule, 2008).

2.1.1 The GLOBE study

House et al., (2004) has completed a complex study of how the relations between culture and societies, organizations and leadership. GLOBE is a research program aiming to conceptualize, operationalize, test, and validate inter-relationship between social culture, organizational culture, and organizational leadership in 62 nations. The

acronym for GLOBE is; Global Leadership and Organizational Behaviour Effectiveness. GLOBE has developed clusters merging countries with similar cultural values. The object is to explore both cultural practice and cultural values. Practices are behaviour or the way things are done in the culture, and values are beliefs and the way things should be done. Further questions are; how is culture related to societal practice, organizational practice and leadership attributes. Secondly, GLOBE aim to understand what works and what does not work in different cultural settings.

The study has tested 27 hypothesis, with data from 17 300 managers in 951 organizations in 62 countries. Variables are measures with cultural sensitivity and the instruments are developed in consultation with members of the relevant culture. The cross cultural studies have a theoretical and a practical perspective. Methods being used are both explorative and confirmative. Focus groups and theoretical research was used to develop useful instruments for all levels of the GLOBE research. Reliability and validity was checked with multi method approaches. Data was analyzed with multi level confirmative factor analyses and hierarchical linear modelling (quite similar to regression analysis). Most literature assumes that societal practice and values are correlated. GLOBE found negative correlation in many cultures. For most dimensions the mean values scores are higher than the mean practices scores. In regards to two of the GLOBE dimensions; Power Distance and Assertiveness, the mean score for values are lower than those for practices. Cultures with high Power Distance show for instance that managers wanted less Power Distance than was found is practice (House et al., 2004).

House et al., (2004, p. 5) define culture as *"shared motives, values, beliefs, identities, and interpretations or meanings of significant events that results from common experiences of members of collectives and are transmitted across age generations"* National cultures are in the GLOBE study examined within nine cultural dimensions of Hofstede (1980, House et al., 2004). All dimensions include various variables. The definitions of the dimensions are shown in the table below.

Table 1: GLOBE cultural dimensions (House & Javidan, 2004).

Cultural dimensions	Reflects values like:
Performance orientation	The extent to which a community encourages and rewards innovation, high standards and performance improvement
Future orientation	A more general construct, time orientation, that relates to the subjective experience of time, planning and delaying gratification
Assertiveness	Whether people are or should be encouraged to be assertive, aggressive, confrontational, tough, or non-assertive, non aggressive, and tender in social relationships
Power distance	The extent to which a community respects and endorses authority, power differences and status privileges. Degree to which individuals in organizations expect or agree that power should be unequally shared
Human orientation	Descriptions of ideas, values, and prescriptions for human behaviour. Values like: altruism, benevolence, kindness, love, generosity and kind heartedness
Individual vs Collectivism	To what extent societies are individualistic or collectively driven
In-group collectivism	Divorce rates and poor due process, suggestions on the emphasis on the family
Uncertainty avoidance	The extent to which ambiguous situations are threatening to individuals, to which rules and orders are preferred, and to which uncertainty is tolerated in society
Gender egalitarianism.	The extent to which each person prescribes and proscribes different roles for women and men.

The results of House et al., (2004) GLOBE study, lead to development of different cultural clusters. They found that to use cultural clusters (a group of countries that share many similarities) was affective in studying cultural similarities and differences. The clusters share some main values and beliefs regarding national culture and leadership. 10 clusters have been explained, in accordance with the nine dimensions. The clusters are Latin America, Anglo, Latin Europe, Nordic Europe, Germanic Europe, Confucian Asia, Sub Saharan Africa, Middle East, Southern Asia, and Eastern Europe (House et al., 2002; 2004) GLOBE Anglo Cluster comprises Australia, Canada, England, Ireland, New Zealand, South Africa and USA (House et al., 2002; 2004). The Anglo Cluster will be used as a reference frame in relation to the UK results, and the Nordic Europe Cluster in relation to the Norwegian results. The table below indicates differences between the Nordic Europe and the Anglo Clusters in regard to mean societal practices.

Table 2 Anglo and Nordic Europe cluster scores (House et. al., 2004, p. 193)

Cultural dimension	High Score Clusters	Mid Score Cluster	Low Score Clusters
Performance oriented	Anglo	Nordic Europe	
Assertiveness		Anglo	Nordic Europe
Future Orientation	Nordic Europe	Anglo	
Human Orientation		Anglo Nordic Europe	
Individual Collectivism	Nordic Europe	Anglo	
In-group Collectivism			Anglo Nordic Europe
Gender Egalitarianism	Nordic Europe	Anglo	
Power Distance		Anglo	Nordic Europe
Uncertainty Avoidance	Nordic Europe	Anglo	

As the table shows the Anglo and the Nordic Europe clusters score are quite different. The only similar scores are on the Human Orientation and In-group collectivism. The relevant cultural dimensions in this study are; Assertiveness and Power Distance. Both Assertiveness and Power Distance are found to be higher in the Anglo Cluster than in the Nordic Europe Cluster. The high emphasis on authority, power differences and status in the Anglo cluster is explained as a result of the British history of colonies maintaining the motherland practices. Individualism may be derived from the struggle of self dependence, and personal material possessions (House et al., 2004). Scandinavian countries have a history with long tradition of socialism and collectivism, which may have an effect on this result. It will be interesting to see if the HSE-study finds similar results with regard to Assertiveness and Power Distance on the UK and the Norwegian Continental Shelves.

2.1.2 The GLOBE leader study

House et al., (2002) central theoretical understanding is that specific cultural artefacts will effect leadership and organizations differently in dissimilar cultures (House et al., 2002; 2004). With the increasing globalization a more cross-cultural approach is taken by House et al., (2004). Leadership in general can be referred to as *"a group member whose influence on group attitudes, performance, or decision making greatly exceed that of the advantage of the member of the group"* (Simonton, 1994, in House et al.,

2002, p. 5). GLOBEs universal definition on leadership is: *"the ability of an individual to influence, motivate, and enable others to contribute towards effectiveness and success of the organization of which they are members"* (House et al., 2002, p. 5).

The dimensions in the GLOBE leader study are based on different leadership traditions. The dimensions are not used in the HSE-project measures, but The Anglo and the Nordic Europe clusters results are useful as a framework in connection to interpretation and comparison of the UK and Norwegian results. The GLOBE results of the different clusters are compared and attributed to affective leadership. Leadership questionnaires have been answered by thousands of middle managers in food processing, finance, and telecommunications. Dimensions rates affective and ineffective leadership practices. Cultural dimensions are compared with six leadership dimensions. The dimensions are based on behavioural and attribute descriptors (House et al., 2002).

The six leadership dimensions are: Charismatic/value based leadership, Team Oriented leadership, Participative leadership, Human Oriented leadership, Autonomous leadership and Self protective leadership. *"Knowing what is considered to be effective or ineffective in the cultures with which one interacts, is likely to facilitate conflict resolution and improve the performance of interacting individuals"* (House et al., 2004, p. 7). GLOBE leadership theory argues that specific cultural values, ideologies and norms have a bigger influence on leadership style than structural factors between societies. Cultural history and traditions does influence beliefs, interpretation, behaviour and again safety organizational culture (House et al., 2004). GLOBE leadership theory argues that each culture develops its own implicit theory of leadership. The study found that some leadership values were universal. Love, friendship, and concern turn out to be universal cultural values and shared in society across the world (Dickson, 2003). The emphasis of these values varies however in different cultures. Different constructs are conceptualized differently, and also exhibit different behaviour in each culture. Leadership is most likely therefore culturally endorsed.

GLOBE found that people within cultural groups agree in their belief about leadership (House et al., 2004). In cultures with high Power Distance superiors are encouraged to demonstrate and exercise power. Subordinates are expected to be passive and follow instructions and orders. Organizations are characterized as hierarchical and decision-making is decentralized. In low Power Distance cultures there is a closer relationship between supervisors and subordinates. The organizational structures are

flatter and subordinates are more involved in decision-making (Carl, Gupta & Javidan, 2004).

The leadership values in the Anglo and Nordic Europe clusters shared many similarities. Both clusters assert values like a Charismatic; Team oriented and Participative leader style. House et al., (2004) found however significant differences on two dimensions; Human orientation and Self-protective dimension. In the Nordic Europe Cluster, Human orientation is the lowest among the clusters. The Self-protective dimension reported is the most negative of all clusters. (Dorfman et al., 2004; House et al., 2004). In the Anglo cluster a dislike of rules and authority exists, and employees must be able to have their say and have delegated responsibility (House et al., 2002; 2004). It is important to have in mind that this is leadership values not practices.

2.1.3   Leadership

"Frequently, leadership is given a very broad meaning and includes almost everything that a manager or an informal leader does..." (Alvesson, 2002, p. 100). There is a difference between management and leadership. The biggest difference is in the way they motivate the people who work for or follow them. People can be both managers and leaders at the same time. In most cases managers have administrative responsibility and are accountable to executives, and leadership may only happen occasionally. A distinction between managers and leaders is in the way that managers have a formal position and work with processes like planning, budgeting, organizing and controlling. Leaders rely more on their personal abilities, and work with visions, motivation, agendas and coalition building. They may effect people's feelings and thinking more than managers do (Alvesson, 2002, p. 100).

Academics struggle to find a good definition of leadership, but lay people don't seem to struggle nearly as much. Leadership is often interpreted "in the eye of the beholder" (House et al., 2004). There has been an explosion of leadership theories, and it seems that the biggest issue is to challenge followers to perform beyond normal expectations (Bass & Riggio, 2006). Over time leadership has changed in relation to requirements in the society. It started with Taylor's Scientific Management in the beginning of the century, and moved on to Democratic Leadership around 1940. Today Human Recourses are the main leadership value (French & Bell, 1999). Leadership schools are stretching from Lassiez faire in one end to Authoritarian and Total control in the other. Some examples of leadership styles within Human Recourses are;

Charismatic leadership (Nadler & Tushman, 1990), Situational leadership (Hersey & Blanchard, 1977 in Bolman & Deal, 2004), and Organizational learning (Senge, 2004). Karlsen (2004) uses the concept sustainable HSE-leadership, and claims that leaders must have the environmental issues in mind at all times. Leaders need to do more than follow laws and safety (Karlsen, 2004).

According to Dickson et al, (2003) an emerging area of research is investigating the universality of social intelligence and relational competence in leadership. It refers to interpersonal acumen and affects the ability to interpret the underlying motives or intentions of others behaviour (Dickson et al., 2003; Spurkeland, 2005). This style of leadership seems to be related to House et al., (2004) definition of leadership, and appear to support the content of the construct 'leader'. Sako and Helper (1996) found the conceptualization of trust to be different for the U.S. and Japanese employees. The latter group was found to demonstrate a greater capacity to distinguish among different types or elements of trust. Cultural values and beliefs will influence how employees interpret and understand different concepts, and will again influence their work performance. The cultural and contextual aspects need to be prioritized in regards to leadership styles (House et al., 2004).

Leadership styles may according to Jacobsen (2004) be divided into two main types. Leader-strategy E (hard) is leadership that is based on telling others what to do, mainly 'top-down' influenced. Leader-strategy O (soft) is the other style, where employees are more empowered and 'bottom up' strategies are the norm. Team-work and cooperation inspires employees to engage in new challenges and affective work performance. Strategy E and O may be used by the same person for different purposes and in different contexts. These styles are connected to Burns et al., (2006) explanation of leadership as either transformational or transactional (Bass & Riggio, 2006; Burns et. al., 2006; Jacobsen, 2004).

2.1.4 Transformational and transactional leadership

The two main categories of leadership styles are today categorized as transformational and transactional. It is found to be an affective form of leadership in a variety of settings in many cultures and countries (Bass & Riggio, 2006; House et al, 2004). House and Javidan (2004) lean upon Bass (1997, in House and Javidan, 2004), who argues that three components of transformational leadership are universal: charisma, intellectual stimulation of followers, and individualized consideration towards followers.

"Although some fine tuning may be required, on all continents people's ideal leaders are transformational, not transactional. Transformational leadership is more affective than contingent reward which in turn is more affective than managing by exception. Laissez faire leadership is contraindicated" (Bass, 1996 in House & Javidan, 2004, p. 65).

Burns (1978, in Jung & Avolio, 2000) separates leaders that build relationships or exchange relationships with their followers. Transforming leaders engage in emotional involvement in building higher levels of identification, commitment and trust in the leader. Factors that are important are identifying values and shared values (Jung and Avolio, 2000). Transformational leadership has much in common with Charismatic leadership, and emphasize support, mentoring, coaching, and intellectual stimulation. They often demonstrate good communication skills. To formulate visions, and create a belief and commitment in the ability to achieve goals, is of particular importance for transformational leaders. They are often enthusiastic, inspirational, genuine, honest, and good at motivating their followers (Conchie & Donald, 2007; Jung & Avoilo, 2000). The leaders focus on empowerment and discussions with followers. To be a good role model and include others in your own success is valuable. Transformational leaders pay attention to individuals' the unique potentials and needs, and put importance on personal development of followers own leadership potential (Bass & Riggio, 2006; Jacobsen, 2004).

Transactional leadership style emphasizes the transaction or exchanges that take place among leaders, colleagues and followers. Transactional leaders are good 'political' leaders, and work through creating clear structures, so that subordinates know what is expected of them. Formal systems are followed and the managers often have a telling style (Jacobsen, 2004). The relation with subordinates is based on rational expectations and provides rewards in exchange for good performance. It is a form of contingent reinforcement that focuses on the followers current needs to achieve the desired performance (Bass & Riggio, 2006; Jung and Avolio, 2000). In contrast with transformational leaders, transactional leaders tend to acquire what may be called 'conditional' trust. Trust is related to a reliable behaviour regarding contracts and exchanges.

"The difference between the two leadership styles is such that transactional leaders are reliable and predictable, while transformational leaders are motivational

and encourage the development and involvement of workers" (Bass & Avolio, 1997 in Conchie & Donald, 2006, p. 303).

Transformational leadership is found to have a positive effect on followers' trust and value congruence, and in building a strong safety culture (Clark & Ward, 2006; Conchie & Donald, 2007; Jung & Avolio, 2000; Mearns, Flin & Gordon, 2001). In regards to transactional leadership Jung and Avolio (2000) found that this leadership style had no significant positive effect on trust and minimal effect on followers' value congruence. Clark and Ward (2006) have completed a safety climate study in a UK based manufacturing organization. They found support for more rational tactics, and a transactional leadership style according to developing a good safety climate. Contingent reward was affective in addition to transformational leadership, and is connected with lower injury rates, and that: *"Rational" leader influence tactics (rational persuasion and exchange) will have a significant positive association with safety participation"* (Clark & Ward, 2006, p. 1177). Transactional leadership style, as well as the transformational leadership style, appeared to have a positive effect on safety participation (Clark & Ward, 2006). There is little in the safety literature that combines more rational persuasion leadership styles as a positive element of improving safety (Clark & Ward, 2006). It is however necessary to be aware of the fact that this was a safety climate study, not a study of trust in particular. Trust, safety culture and safety climate however, should not be seen as separate constructs given the strong connections between these factors.

Transformational and transactional leadership styles are often presented as one good, and one bad (Jacobsen, 2004). Bass & Riggio (2006), claim that one leadership style may fulfil and compliment the other. They are suitable in different contexts according to various organizational challenges. Transformational leadership is difficult if transactional elements do not add up to satisfaction. Many leaders' however use both styles in a successful way (Bass & Riggio, 2006; Jacobsen, 2004). A combination may according to Clark and Ward (2006), be affective and useful in high risk organisations.

2.2   Three different approaches to trust

Different theoretical approaches suggest that trust includes elements of benevolence (care and concern), competence, consensual (or shared) values, consistency, expertise, fairness, faith, honesty, integrity, knowledge, objectivity, openness, past performance,

predictability, reliability, respect, sympathy and truth (Seppanen et al., 2007, White & Eiser, 2006).   In addition to different aspects of the content of trust, the non-native content might vary in different cultures and contexts (Cvetkovich & Nakayachi, 2007; Sako & Helper, 1998; Seppanen et al., 2007).

Psychological traditions focus on the complex intrapersonal states associated with trust; cognitive and affective processes, cause of actions, beliefs and so forth. The object is to understand the internal psychological processes and dispositions that create trust relations (Lewicki et al., 2006). The psychological tradition may be categorized according to three main perspectives: the uni-dimensional approach, the two dimensional approach and the transformational approach.

The uni-dimensional approach defines trust as *"a psychological state compromising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another"* (Rousseau, 1998 in Lewicki et al., 2006, p. 996). Trust is a cognitive process that accepts vulnerability, but also includes positive expectations. This definition is associated with "good or high trust". Coote, Forrest and Tams (2003, in Seppanen et al., 2007, p. 254) claim that: *"trust exists when one party has confidence* in *the honesty, reliability and integrity of their partner".* Mayer et al., (1995 in Lewicki et al., 2006) support this definition, and focus on similar cognitive factors such as beliefs and judgements of another's trustworthiness in his definition. Trust is *"the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party"* (Mayer et al., 1995 in Lewicki et al., 2006, p. 997).

In addition to cognitive processes trust contains Affective and behavioural factors. Affective factors involve feelings and relational bonds between individuals in interpersonal relationships. Behavioural factor explains that trust is reciprocal. When we trust someone; they will most likely behave in a trustworthy way, and trust us in return (Lewicki et al., 2006). Most of the studies regarding trust relationships have focused on cognitive factors like ability, benevolence and integrity. The emotional or affective factor has not been given much consideration. Distrust is in the uni-dimensional approach seen as the opposite of trust. Low trust is equal to distrust. Trust and distrust are bipolar opposites of a single dimension, where distrust is lack of confidence in others (Burns, Mearns and McGeorge, 2006; Lewicki et al., 2006).

The two dimensional approach views trust and distrust as two distinct concepts. Both trust and distrust include cognitive, affective and behavioural factors. Trust is regarded as *"confident positive expectations regarding another's conduct, whereas distrust is confident negative expectations regarding another's conduct"* (Lewicki et al., 2006, p. 1002). The concepts of trust and distrust are rated on a scale from low to high. Cognitive factors for trust are ability, benevolence and integrity, which are characteristics of trustworthiness. Cognitive factors for distrust are associated with confident negative expectations about a person's trustworthiness. The affective factors for trust refer to emotions like hope, faith and confidence, and for distrust: fear, scepticism, cynicism and alertness. It is possible to have a high or a low level of fear. Behavioural factors comprise reliance on others; that the other will act in a trustworthy way. For distrust behavioural factors are to monitor, check and withhold important information (Lewicki et al., 2006).

Interpersonal relationships are complex. You can trust a person in some areas, but not in others. This is probably more common than complete trust in a person. Trust and distrust levels change depending on frequency, challenges and strengths of relational bonds developed within the relationship. According to Lewicki et al., (2006) the result is either positive expectations of trust or negative expectations of distrust. Relationships may according to the two-dimensional approach contain both high trust and high distrust at the same time. The uni-dimensional sees trust and distrust as bipolar opposites. The two dimensional approach adds distrust as a separate independent construct where low trust is not the same as high distrust.

The transformational approach further expands the two other perspectives. This approach amplifies the complexity, and the nature of trust. Different types of trust transform over time. Researchers have tried to answer two questions about trust. The first is to understand the nature of trust, and if the depth and range of trust change over time as relationships mature. The second is to understand whether deep trust in close relationships is different from transactional trust. Lewicki et al, (2006) show three main interpretations: Shapiro, Sheppard and Cheraski (1992), Lewicki and Bunker (1995, 1996) and Rousseau, Sitkin, Burt and Camerer (1998).

Shapiro et al, (1992, in Lewicki et al, 2006) divides trust in three bases. Deterrence Based Trust (DBT) has to do with whether you can trust each other, and if the other will keep his or her word. Knowledge Based Trust (KBT) depends on the person's ability to know and understand the other well enough to predict his or her

conduct. Identification Based Trust (IBT) occurs when the person can identify themselves with another. They share values, desires, intentions and wants (Lewicki et al., 2006).

Lewicki and Bunker (1995, 1996) use the same three trust bases. This approach is however broadened and more clearly articulated in stage levels and linkages of different bases of trust. DBT is renamed Calculus Based Trust (CBT). It also includes various forms of relations and bonds within different relationships, and not just vulnerability. Affective Based Trust (ABT) was in addition supplied and explained as an emotional sub-factor to CBT. Trust is often characterized with an emotional bond between parties, especially in close interpersonal relationships. CBT was eliminated because it did not maintain integrity across relationships. The remaining trust bases showed that all predicted different outcomes, and that trust moves in phases through a relationship. Different types of trust are linked sequentially, in that achieving trust at one level enables development of trust at another level (Cox et al., 2006; Lewicki et al., 2006).

Rousseau et al., (1998 in Lewicki et al., 2006) proposed the idea of an even more complex, multidimensional understanding of the trust concept. Trust has a rich bandwidth, and varies in form, range and character within different relationships. The core element of trust is CBT, which is based on rational decisions in the sense that we must "trust by verify". In addition relational trust (RT) was included, and described as: *"derived from repeated interaction between trustor and trustee in which caring, concern, and emotional attachment have developed"* (Lewicki et al., 2006:1012). This relational trust is similar to Affective trust, and is defined as an emotion that develops through interpersonal experiences (Conchie et al., 2006). Trust is further developed through repeatedly trustworthy behaviour (Spurkeland, 2005).

> *"Reliability and dependability in previous interactions with the trustor give rise to positive expectations about the trustee's intentions. Emotion enters into the relationship between the parties, because frequent, longer-term interactions leads to the formation of attachments based upon reciprocated interpersonal care and concern"* (McAllistar, 1995 in Lewicki et al., 2006, p. 1013).

Also Seppanen et al., (2007) understand trust as a soft concept where trust is interpreted as a socio-psychological, interrelated phenomenon, and is perceived differently by individuals. People interpret social information and build trust, in term of their own references and their cultural values. They use their own attitudes as a frame for

understanding and practice trust (Jeffcott et al., 2006; Seppanen et al., 2007; Poortinga & Pidgeon, 2005). Recent studies have found that trust is asymmetric, and reflects the influence of peoples` prior values and attitudes to the issue. This may be especially important for situations of distrust. Trust links people who share the same values, understanding and opinions (Poortinga & Pidgeon, 2005). According to a transformational approach interpretation of trust may vary in different organizations and also in different national cultures.

The construct trust has developed over the years according to different approaches, content and research. All three approaches seem to be used to understand and explain the nature, development and importance of trust and trust relations in different contexts. To obtain a thorough overview is not easy, because the concept is used in so many ways and contexts. All in all trust seems to be a complex construct that is perceived and developed differently within individuals, relationships, organizations and cultures.

In this survey trust is perceived as a two-dimensional and transformational approach. Cognitive, affective and behavioural factors are all included in the perception of trust. Development of trust happens through various experiences, understanding and interpretation of another's trustworthiness. Ability (competence), integrity (promise fulfilment) and benevolence (care and concern) are important dimensions regarding trust (Conchie & Donald, 2007). In addition to these cognitive factors a softer side of trust is included. Affective factors like emotions and relations in various interpersonal levels and forms of relationships are important elements in the trust concept (Lewicki et al., 2006, Seppanen et al., 2005).

2.3   Trust and safety

Trust is in the safety literature mainly recognized as a significant factor in developing a good safety culture and in reducing near misses, incidents and accidents within organizations (Conchie et al., 2006; Conchie & Donald, 2007; Conchie & Burns, 2008; Lewicki et al., 2006; Burns et al., 2006; Mearns & Yule, 2008; Poortinga & Pidgeon, 2005; Reason, 1997; Tharaldsen et al., 2008a). *"It is important to create a corporate atmosphere or culture in which safety is understood to be and accepted as, the number one priority"* (Cullen, 1990 in Mearns et al., 2001, p. 145).

To explain trust and its relations is a neglected area with regards to High Risk Organisations (Conchie & Donald, 2006b; 2007; Jeffcott et al., 2006). Most studies completed within the safety literature have a uni-dimensional approach to trust. The understanding of trust revolves around the perception of another's trustworthiness and the willingness to be vulnerable. Trust is considered bipolar; high trust is good and positive and low trust or distrust, is negative. Trust is used in the meaning of success, and distrust in failures. Distrust has mainly been 'lack of trust', failed safety initiatives, or an absence from shared safety perceptions. On the opposite, trust is often associated with issues like open communication, positive safety attitude and responsibility for safety, shared safety perceptions and reduced safety incidents (Conchie & Donald, 2007: Reason, 1997).

A good safety culture is characterized by some of the same factors; mutual trust, open communication, shared perceptions regarding safety, and an encouragement for employees to report incidents or accidents (Conchie et al. 2006; Conchie & Donald, 2007; Jeffcott et al., 2006: Hale, 2000; Reason, 1997). Trust may increase open communication, and open communication may increase trust. Trust in safety communication mirrors its role in the relationship between other safety factors, such as shared safety perceptions and safety performance (Conchie et al., 2006; Conchie & Donald, 2007).

2.3.1 Organizational- and safety culture

Organizations normally consist of a group of people co-operating to attain common goals. It is systems of meaning shared to various degrees (Alvesson, 2002). Organizations are traditionally understood as separated arenas; including division of assignment and labour, different power distance, methods, structure, rules and procedures developing at all times (Busch & Vanebo, 2003). In post-modern perspective organizations are explained as open, dynamic and complex, effected by conditions within and outside of the organization. Factors that may influence organization are: politics, market, oil prices, competence, workforce availability and so forth. Jose Fonseca (2002) supports this view and adds that organizations are *"patterns of relationships between people"* (Fonseca, 2002, p. 7). These 'patterns' are often described as organizational culture. According to Schein (1992 in House et al., 2004) organizational culture is:

"a pattern of basic assumptions-invested, discovered or developed by a given group as it learns to cope with their problems of external adaptation and internal integration - that has worked well enough to new members as the correct way to perceive, think, and feel in relation to those problems" (Schein, 1992 in House et al.,2004, p.425)

Alvesson (2002) has a complex approach to organization, focusing on organizational culture as open and dynamic systems existing of common meanings and symbols. Culture is significant in how companies and organizations function with regard to strategic planning, implementation, leadership, and how managers and employees relate to and interact with co-workers and customers (Alvesson, 2002).

The term safety culture first appeared in the International Atomic Energy Agency's report on the Chernobyl accident (Reason, 1997). There are many definitions of the concept and most of them are derived from the organizational culture literature. A much used definition of organizational culture is: *"the shared values (what is important) and beliefs (how things work) that interact with an organization's structure and control system to produce behavioural norms (the way we do things around here)"* (Reason, 1997 p. 192). Safety culture is a part of the HSE-culture, and is often understood as a subcomponent or indicator of organizational and societal culture (Glendon & Stanton, 2000; Guldenmund, 2000; Mearns & Flin, 1999; Tharaldsen, Olsen & Rundmo, 2008b).

Most safety culture definitions reflect fundamental values, beliefs and underlying attitudes, norms, assumptions and expectations (Tharaldsen & Mearns, 2007; Tharaldsen, et al., 2008b). Expressions of these factors are recognized in the workers day to day practice (Jeffcott et al., 2006). Jeffcott et al., (2006), claims that culture is something an organization "has", not something they "are". *"A safety culture is based around a set of defined practices that an organization is able to adjust in either a positive or negative direction"* (Jeffcott et al., 2006. p. 1106). This is a more dynamic and complex definition, and incorporates personal dissimilarity and flexibility regarding changes in the environment. Tharaldsen et al., (2008b) agree with this perspective and consider safety culture as the collective ability to produce organizational and inter-organizational work practices that both protect individual welfare and the environment.

Safety culture can be difficult to deconstruct and operationalize. Many researchers are therefore focusing on measuring safety climate. Safety climate may be explained as *"employee perceptions regarding the enactment of organizational policies and procedures relating to safety"* (Means and Yule, 2008, p. 3). Safety climate is employees' perceptions, attitudes and beliefs about risk and safety. It is a reflection of

an underlying safety culture of a work group or organisation. It is often measured by questionnaires and provides us with a "snap shot" of the current state of safety. Safety culture, however, is considered to be a more complex and enduring phenomenon than safety climate, and is often studied in qualitative research (Tharaldsen & Mearns, 2007; Tharaldsen et al., 2008b).

Reason (1997) claim that a good safety culture must incorporate four sub-cultures. These are; a reporting culture (an atmosphere that encourages reporting incidents and accidents), a just culture (as much safety-related information as possible is communicated freely), a flexible culture (ability to shift from a hierarchical structure to a flatter structure, where control passes to task experts), and a learning culture (a universal commitment to use and act on safety-related data in the most appropriate way in order to reduce risk). Together, these interact and an informed culture develops (Conchie & Donald, 2006a; Jeffcott et al., 2006; Reason, 1997). An informed culture that takes a proactive approach to safety may have less risky behaviour and reduced incident rates (Burns et al., 2006; Reason, 1997). Trust may help this reduction, and may facilitate reporting of safety incidents. The leaders should make it clear that reporting benefits everybody and will not be sanctioned (Burns et al., 2006). Key factors for good safety culture are commitment to the continuous reflection over unsafe situations, and in the way that the organisation manages these situations (Hale, 2000). If the quality of the interaction between employees is based on open communication about safety issues, this may increase awareness of safety concerns and promote better safety attitudes and safer behaviour (Conchie & Burns, 2008). The absence of trust may have the opposite effect, and the outcome may be that issues are not reported. The consequences may be incomplete organizational leaning, and additional accidents.

2.3.2 Functional trust and distrust in safety performance

Some of the recent studies within the safety issues in High Risk Organizations are based on the two dimensional and transformational approaches. Trust and distrust are explained as multi complex constructs, containing different meanings in various contexts. Conchie and Donald (2007) have a two-dimensional approach to trust, and a strong focus on functional distrust. Lewicki et al., (2006) questions the optimal level of trust, and also discusses whether trust may have both a positive and negative role in safety behaviour and in organizational safety culture. Trust should therefore not be understood as a single construct. It is an interrelated process that has different meanings,

understandings and results in different contexts (Lewicki et al., 1998; Conchie et al., 2006; Conchie & Donald, 2006b; 2007).

Conchie and Donald (2007, p. 2) define safety-specific trust: *"as a person's willingness to rely on another based on positive (...) expectations about their safety behaviour, or intention to act safely".* Trust is explained as cognition based trust, because it contains trust as a rational decision to trust another person based on some objective factors like competence, skill or judgement (Conchie & Donald, 2006a; Conchie & Burns, 2008). It is also Affect based trust, where emotions are involved in trusting the other person's intention. Affect based trust is less rational and develops from perceptions of another person motivated by factors other than self-interests. According to Conchie and Donald, (2006a; Conchie & Burns, 2008) it is likely that these two concepts also exist in the specific context of safety, and exert influence on safety behaviour. Affect based trust is related to motivation and commitment to organizational goals, and is believed to have the strongest impact on safety behaviour. The behavioura1 factor can be applied because of the expectations of others behaviour if you trust someone, they will behave in a trustworthy manner towards you. Conchie and Donald (2007) and Conchie and Burns (2008) rest on the social exchange perspective, which is grounded on the assumption that behaviour carried out to benefit another, will result in feelings of obligation.

Conchie and Donald (2007) claim that safety-specific interpersonal trust and distrust are two distinct constructs where both are necessary for optimal safety. Their Model of functions of safety specific trust and distrust (Conchie & Donald, 2007) distinguishes between trust and distrust. Both trust and distrust are divided in dysfunctional and functional trust and distrust.

Safety behaviours
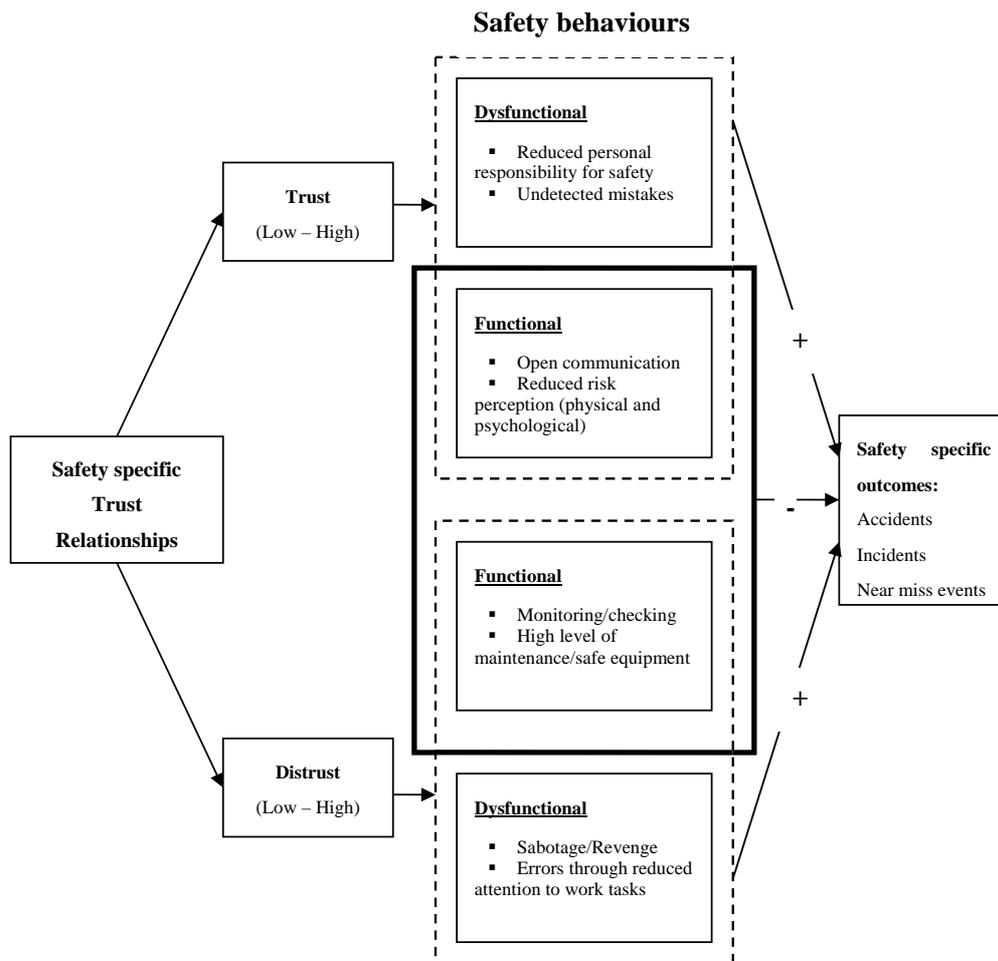
Figure 2: Model of functions of safety specific trust and distrust
(Conchie and Donald, 2007:5).

Conchie and Donald's (2007) model explains positive safety specific outcome, meaning less accidents, incidents and near misses, if a functional trust and distrust approach is admitted. Dysfunctional trust and distrust have negative implications for safety behaviour. It seems like Conchie and Donald's (2007) model emphasises a behavioural perspective. Behavioural elements of trust explain trust as reciprocal. When we trust someone; they will most likely behave in a trustworthy way, and trust us in return (Lewicki et al., 2006).

An organisation which attains complete trust may experience reduced responsibility and alertness to safety incidents (Cox, Jones & Collinson, 2006). Conchie

and Donald (2007) name this kind of trust: dysfunctional trust. Jeffcott et al., (2006) reported similar factors in their qualitative study from the UK Train Operating Companies. The study found that too high a level of trust might result in overconfidence and also in lack of initiative. Too much trust may reduce workers flexibility and ability to improvise when rare safety events arise. It may also reduce important alertness and a feeling of responsibility that is needed in high risk organizations, where safety is of invaluable importance. Jeffcott et al., (2006) found that the safety culture was characterized by "rule-based" trust. Rule-based trust can be described as a "taken for granted" type of trust. Rule based trust reduced alertness to possible incidents that might happen (Jeffcott et al., 2006). In some organizations rule-based trust, in the sense of people have shared understandings, may have the effect that they are too confident in each other, and have too high confidence in systemic abilities. This kind of trust may prevent development of a good safety culture. High trust can create a blindness where trust is exploited and taken advantage of. Too much trust may be defined as dysfunctional trust, and is found to be the best predictor of unsafe safety behaviour (Jeffcott et al., 2006).

Functional trust and distrust are thought to have the opposite effect; if workers and management have interpersonal trust, reporting may increase, be more accurate, and safety learning will be promoted (Conchie et al., 2006; Conchie & Donald, 2007). Functional trust is important in determining employees' attitudes and commitment to safety participation, and *"trust may have a direct and significant effect on the extent to which employees engage in safe behaviour"* (Conchie et al., 2006, p. 1099). Functional trust is important because of the need to rely on others and to co-operate and commit to organizational values and goals. Trust has a close relationship with open communication, cooperation and performance. If there is trust people will be more willing to act in ways that extend the formal roles, work towards a common goal, and share information (Cox et al., 2006; Seppanen et al., 2007; Spurkeland, 2005).

Safety literature has given the concept of distrust little attention. Interpersonal distrust is believed to cause unsafe behaviour and accidents, and: *"may lead to an increase in the frequency of shortcuts or haphazard working practices"* (Conchie & Donald, 2006b, p. 1157). Lewicki et al., (1998 in Conchie & Donald, 2007, p. 3) define distrust as *"negative expectations of another's conduct which typically manifest as a tendency to attribute sinister intentions to, and desire to buffer oneself against, another's conduct"*.

Lack of shared perceptions, lack of trust and, lack of trust between managers and employees have been the most noted perceptions about distrust (Conchie & Donald, 2006b). Construct like critical trust and creative mistrust is used in addition to functional distrust.

Lewicki et al., (2006) claim that some distrust may be functional and even healthy in certain circumstances. Particularly when there is reason to suspect that another party is not trustworthy within the broader bandwidth of a relationship. Critical trust can be understood as *"practical reliance on another person combined with healthy scepticism"* (Pidgeon et al., 2003 in Conchie et al., 2006, p. 1099). Functional distrust ensures an alertness that is essential for risk regulation, and has some similarities with' critical mistrust'. There is an essential need for scepticism, alertness and checking in High Risk Organizations. The study of Conchie and Donald (2007) show that checking and controlling of oneself and others, is an active part of a proactive safety culture. This may be interpreted as functional distrust, and is of great importance for safety behaviour on platforms.

Hale (2000) introduced the concept of creative mistrust in relation to safety behaviour, and claim an organizational dependency of creative or functional mistrust. Even though there is a caring trust for each other, that each will do their own part, everybody (including your self) must have a watchful eye and a helping hand to cope with the inevitable slips and errors that may occur. This leads to overlapping and shared responsibility for safety. Humans make mistakes, errors will occur and employees must allow checking behaviour (Hale, 2000). Creative mistrust reflects a positive wariness about the standard of safety systems and safety management. Even though it has negative connotations (like distrust) it is reported positive in regard to the organizations that are engrained with too much trust, or what Jeffcott et al., (2006) called rule-based trust (Cox et al., 2006).

Reason (1997) claim that no trust may lead to a poor safety culture and accidents. According to Conchie and Donald (2006b; 2007) complete- or dysfunctional distrust may be detrimental for safety, and may lead to poor environment, bad relationships and non-cooperation. Competitiveness, poor interpersonal behaviour, poor work performance and poor psychological health, underreporting of near misses and accidents and in worst cases sabotages and revenge may be the result. Organizational learning will be reduced (Conchie & Donald, 2007). Low level of trust may lead to negative attitudes and dependency may be found psychologically distressing (Conchie & Donald,

2007; Reason, 1997). This kind of behaviour may reduce open communication and possibly limit the opportunity to develop shared perceptions in regards to safety (Clark & Payne, 2006). In High Risk Organisation trust is crucial for everybody. Low level of trust may in the end lead to serious accidents. Both dysfunctional trust and distrust may be detrimental for safety.

A combination of functional trust and functional distrust will most likely reduce accidents. Safety specific interrelated trust and confidence in the other, shared values and a belief that others will perform in a safe way, is however valuable only to a moderate and functional level. Functional trust and distrust are important factors for developing good individual safety performance and again a strong safety culture (Conchie & Donald, 2007).

Studies have been completed to support this point of view. Trust may be associated with negative safety outcomes, and distrust with a positive safety result (Conchie & Donald, 2007; Jeffcott et al., 2006). Distrust may have a positive effect on risk regulation and safety (Jeffcott et al., 2006; Mearns et al., 2001; Conchie & Donald, 2006b; 2007). In addition to the trust concept, distrust must be a highly prioritized component for safety behaviour. The ultimate conditions in organizations are according to Burns et al., (2006), that employee relationships are characterized by a balance of trust and distrust.

Conchie and Donald (2007) separated trust and distrust into four elements. Some researchers however extend the understanding of trust and distrust even further, to a more complex, transformational approach. It seems like recent studies now put more emphasise on affective, emotional and relational factors of trust and distrust. Trust is explained as an inter-related process that has different meanings, understandings and different results in different contexts (Lewicki et al., 1998; Conchie & Donald, 2007). Further research to see which affect these softer sides of trust have on safety relations, needs to be completed within a transformational approach.

3 Method

Social science tries to understand and explain phenomenon that occurs. To give rich, well informed and well substantiated descriptions is one of the responsibilities of social science as well as explaining and trying to understand how the human world is put together. The basis for science is the causal belief; meaning that one thing leads to another. The quantitative and qualitative approaches do not demand strong causal coherence. It explains the probability of a phenomenon occuring, and that some degree of regularity is present. The aim is to look for tendencies, regularities or correlations (Skog, 2005).

The object of this chapter is to substantiate the chosen methods, and give an account for the ontological, methodological and epistemological assumptions. Two methods will be combined in this research design in order to answer the research questions. The results from Phase one; the HSE-questionnaire study is the starting point of the research questions, and will be presented in chapter 3.2. Methods used in Phase two; the qualitative study, are focus group interviews and key informant interview. Data reduction and analysing is performed within meaning coalescing.

The most important ethical issues are related to how the respondents and informants are dealt with. The constructs reliability and validity will be discussed in order to assess the quality of the research. At the end of the chapter the researcher role in the research process is addressed.

3.1 Research design

The object of this study is to complete a comparative analysis of cultural differences across two Continental Shelves – the UK and Norwegian, and how cultural similarities and differences relate to trust, safety and leadership. The starting point of the research is to use methods that are most suitable to answer the research questions. Deliberate and non deliberate ontological assumptions are influenced by an abductive and a pragmatic approach. The researcher's life-word will influence the understanding and interpretations of the entire research process. In order to answer the research questions a combination of qualitative and quantitative methods are chosen. Qualitative data will be used in order to understand and complement the statistical information from the HSE-questionnaire. The understanding and interpretation of both theory and empirical data move back and forth within a hermeneutic circle.

3.1.1 Combining methods

In theory quantitative and qualitative ontological assumptions vary. Quantitative researchers isolate and define variables and variable categories to frame hypotheses. Hypotheses are often produced before the data is collected, and are then tested upon the data. Variables are the means of the analysis. It is often pictured like a researcher looking through a narrow lens, at a specific set of variables (Brannen, 1992). Quantitative method is according to Jacobsen (2005) and Skog (2005) mainly based on a deductive approach. Data collection is based on survey where different alternatives for an answer are given. The goal is to perform an affective statistical analysis, and present the results in enumerative analysis. The purpose is to find frequencies, and how many and what kind of people in general have the characteristic which has been found to exist in the sample population (Brannen, 1992). The object is to make connections or to reveal regularities between variables.

With qualitative research it is the concepts and categories that matter. One of the purposes is to test theory, and participate in analytic induction. Brannen (1992) claims that analytic induction, which often begins without a clear hypothesis, can be combined with deductive methods, and the testing of hypothesis. Qualitative researchers may begin with defining general concepts. During the process of the research program the definitions may change. Variables constitute the product or outcome. The research is described as looking through a wide lens, searching for patterns of inter-relationships between a former unspecified set of concepts (Brannen, 1992). Qualitative method collects information often of a more interpretive and descriptive character. Interviews, group interviews, observation and documentary research are the main approaches (Blaikie, 2000; Jacobsen, 2005). Qualitative research can also be descriptive. *"Enumerative and analytic induction have different starting points therefore: enumerative induction abstracts by generalizing whereas analytic induction generalizes by abstracting"* (Brannen, 1992, p. 7).

Several schools discuss whether designs and methods should be mixed, combined or triangulated (Blaikie, 2000; Creswell, 1994; Ellefsen, 1998; Jacobsen, 2005; Morgan 1998). Traditionally quantitative and qualitative research is seen to belong to different paradigms. It is assumed to be a connection between epistemology, theory and method.

The concept of triangulation was first introduced by Webb et al. in 1966, and was further discussed by Denzin in 1970. He used the term triangulation, a term originally taken from navigation and military strategy, to discuss the combination of various methods within a study of the same phenomenon (Blaikie, 2000; Brannen, 2004; Creswell, 1994; Ellefsen, 1998).

Triangulation is used in different contexts. *"When a hypothesis can survive the confrontation of a series of complementary methods of testing, it contains a degree of validity unattained by one tested within the more constricted framework of a single method"* (Webb et al., 1966 in Blaikie, 2000, p. 263). The purpose of triangulation was to improve validity of the research. Denzin and Lincoln (2003) used the concept in the understanding that triangulation would reveal different aspects of empirical reality. He allowed for and discussed both "within method" triangulation and "between-method" triangulation. The strengths of one method could complete the other in order to achieve the most valid answers (Blaikie, 2000; Morgan, 1998).

The view commonly accepted within social science is that triangulation refers to the measure of concepts used by different methods. Many see themselves as belonging to one paradigm, while others are more pragmatic in combining methods (Brannen, 2004; Creswell, 1994). Blaikie (2000) explains two main possibilities in combining methods. The first is the possibility of using different methods and combinations within the same paradigm. Secondly, different methods can be used in a sequence or stages where the approach switches. The latter approach is used in this study, with awareness about ontological assumptions *"Switching between paradigms requires considerable awareness of the various sets of assumptions that are being used and the capacities to keep the various realities separate"* (Blaikie, 2000, p. 273).

Blaikie (2000) argue that completed studies named triangulation, is different methods used in sequences, rather than different ontological approaches (Blaikie, 2000). Combinations are appropriate if consciousnesses about ontological, epistemological and methodological issues are taken into consideration. *"What is needed is a more systematic understanding of how different research strategies, methods and data can be used creatively within a research project, for example as a developmental process, or as a way of stimulating, theory construction "* (Blaikie, 2000, p. 270). Morgan (1998) acknowledges combinations of methods, but highlights the importance of a conscious paradigmatic approach. The pragmatist argue that *"a false dichotomy exist between qualitative and quantitative approaches and that researchers should make the most*

efficient use of both paradigms in understanding social phenomena" (Creswell, 1994, p. 176).

A deliberate mixture of the mentioned factors is completed in this study. The methods have different philosophical foundations that include different ontological assumptions about how the world is perceived, or how you define the nature of reality. The epistemological assumptions about how knowledge can be perceived, also differs. According to the pragmatic approach these factors may be performed dynamic- and cautiously side by side in research processes (Brannen, 2004). A combination of methods has been used, in order to draw upon the strengths, and overcome the principal weakness of each of them. Quantitative and qualitative methods are used in a complementary manner. The figure below shows the methodological diversity and combinations in this study.
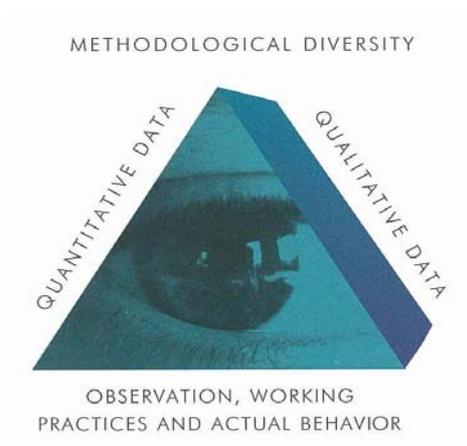
Figure 3: Methodological diversity (HSE and culture, Petroleum Safety Authority).

3.1.2   Ontological assumptions

This study includes quantitative and qualitative methods, and may according to Blaikie (2000), be characterized as using different methods in sequence. In practical work the research process is dynamic, and moves back and forth between theory, hypotheses, concepts and methods (Brannen, 1992; 2004). "*The practice of research is a messy and untidy business, which rarely conforms to the model set down in methodology textbooks*" (Brannen, 1992, p. 3). The epistemology or theory is usually not the sole determinant of a method. The researchers' attitude and beliefs will affect the chosen

methods. A number of pragmatic considerations related to the research context must be ensured.

Blaikie (2000) refers to abductive strategy, which is grounded on hermeneutics, social phenomenology and interpretivism. Hermeneutic is according to Gadamer (2004, in Debesay, Naden & Slettebo, 2008) classified as an ontological philosophy in the interpretation in both qualitative and quantitative methods. Gadamers primary intention is to: *"reveal conditions that facilitate understanding; an aim not intended to be subject to scientific examination; but as `being-in-the –world`"* (Debesay et al., 2008, p. 58). Within a hermeneutic approach ppeople produce subjective meanings, but these can be intersubjective. Intersubjectivity explains that knowledge, meanings or interpretations are subjective, but people may agree and share these opinions. Issues are not true, but intersubjective (Hollis, 1994; Jacobsen, 2005,). Cultural intersubjectivity can be an example. A hermeneutic approach where the interpretation moves in circles is carried out. It is a learning process, where new data generates new theory, and again generates new interpretation and understandings. An important question in research is therefore; how do we close the hermeneutic circle? How is it possible to justify the interpretation of the results of this study?

Interpretivism has a hermeneutic basis but still gives the possibility to develop and test theory (Blaikie, 2000; Hollis, 1994). Abductivee strategy has an interpretive approach to research questions. One of the objects is to explore and understand peoples meanings. *"It is necessary to find out what meaning (motives) people give to the actions that lead to such patterns"* (Blaikie, 2000, p. 115). An abductive strategy involves constructing theory that is grounded in everyday activities and, or in the language and meanings of social actors. There are two stages; describing these activities and meanings, and making categories and concepts that can create a basis of understanding and explanation (Blaikie, 2000).

The research process in this study will be based on an abductive approach, where data and theory are played off against each other in a creative intimately intertwined process. Hermeneutic approach is according to Kvale (1997), interpretation of meanings that move in processes back and forth, between the selected parts and the entirety. Regularities have been discovered in the HSE- questionnaire. Further understanding and interpretation has been developed, through theory and new empirical data, gathered in qualitative workshops and interviews. New theory has expanded and developed the analysis and the discussion of quantitative and qualitative results. The hermeneutic

approach in the abductive strategy, give reason to believe that research processes may be interpreted and completed within a conscious and thought through pragmatic approach. *"The search for knowledge is process orientated, and the search is not for complete knowledge"* (Ruth, 1991 in Debesay et al., 2008).

3.2   HSE-questionnaire study

The first phase of the HSE- project was the quantitative HSE-questionnaire study, completed during the summer of 2007. Quantitative methods are according to Blaikie (2000) used for producing descriptions, establishing associations and causal relationships between variables. The object was to compare Seawell employees in UK and Norway on different dimensions related to HSE. In order to examine the main goals in the HSE-study, measures from the following instruments were included in the questionnaire: The Offshore Safety Questionnaire (Mearns et al., 2001), GLOBE organizational culture scales (House et al., 2004), trust in colleagues and management commitment to safety scales (Conchie & Donald, 2006), a safety intervention scale (Pullwitt, Lauche, Mearns, 2007) and scales aimed at measuring physical and psychosocial work aspects (21 items, COPSOQ, 2004). The questionnaire comprised a total of 159 items.

> *"The objective of the study was to examine: 1) employees safety climate on the UK Continental Shelf (UKCS) and Norwegian Continental Shelf (NCS, 2) organizational culture (GLOBE scales), 3) self-reported risk-taking behaviour, and 4) trust in colleagues' and management's commitment to safety. We expected to find (cultural) differences across shelves, across platform and that what you work with, matters. The results were based on a survey carried out on 3 production platforms on the UKCS and 9 production platforms on NCS. The survey included Seawell employees working within well services in UK and Norway. The response rate was 67% on both the UKCS (N=165) and NCS (N=605). A combination of Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) resulted in a total of 22 factors reported in this paper. Both the GLOBE and the Safety Behaviour scales resulted in two four dimensional models, and the trust scales in a three dimensional model. Structural Equation Modelling indicated that the suggested factor models fitted the data. The overall results showed an organization with high scores on all safety factors. We found support for our hypothesis of (cultural) differences across shelves. The UK respondents report the organization to be more Future oriented and Assertive (Aggressive and Dominant). The results also showed significantly better scores on three out of four Safety behaviour scales for the UK organization. UK workers report higher safety competence, to be more comfortable with confrontations regarding colleagues' behaviour and higher willingness to stop dangerous work. NCS respondents report higher Reporting willingness, but are markedly more*

uncomfortable about confronting colleagues on risky behaviour. Both samples report high trust in workmates, supervisor and offshore management. UK respondents have significantly higher scores on supervisor trust. Highest trust is reported towards workmates, thereafter trust in first line supervisor and finally, trust in offshore management. In Norway highest trust was reported in workmates. We also found support for our two other hypotheses: Where you work (which platform) and with what (discipline) matters for your perceptions on different dimensions" (Tharaldsen et al., 2008a, p. 1)

The overall results showed an organization with high scores on all safety factors. The table below shows all scores for all dimensions and standard deviation across the UK and Norwegian Continental Shelves. Significant differences across shelves have been tested and marked with probability level (Tharaldsen et al., 2008a).

Table 3: Results of the HSE questionnaire study (Tharaldsen et al., 2008, p. 5).

DIMENSIONS	No of	UK Shelf			Norwegian Shelf		
GLOBE	items	N	Mean	Std.D.	N	Mean	Std.D.
1. FUTURE*	3	165	5,5	1,17	601	5,26	1,09
2. HUMANE	4	165	4,96	1,02	599	5,02	0,83
3. POWER DISTANCE (1. question boss)**	1	165	3,09	1,91	599	2,62	1,70
4. POWER DISTANCE (2. social distance)***	1	165	3,83	1,40	595	3,37	1,41
5. COLLECTIVISM	3	165	4,6	1,25	600	4,63	0,93
6. ASSERTIVENESS***	2	165	3,41	1,12	602	2,94	1,03
SAFETY BEHAVIOUR							
1. SAFETY COMPLIANCE***	6	165	4,74	0,49	595	4,39	0,7
2. SAFETY PRIORITIZATION*	3	165	4,8	0,56	595	4,67	0,64
3. SAFETY PARTICIPATION**	4	165	4,09	0,85	596	4,3	0,63
4. RISK TAKING BEHAVIOUR***	2	165	1,21	0,62	594	1,47	0,75
TRUST							
1. TRUST WORKMATES	6	164	4,29	0,67	587	4,25	0,62
2. TRUST FIRST LINE SUPERVISOR**	5	160	4,37	0,74	588	4,17	0,74
3. TRUST OFFSHORE MANAGEMENT	6	162	3,98	0,75	585	3,87	0,71
OTHER SAFETY SCALES							
1. SAFETY COMPETENCE*	5	165	4,61	0,55	599	4,5	0,52
2. REPORTING WILLLINGNESS*	3	165	4,27	0,83	594	4,4	0,72
3. COLLEAGUE CONFRONTATION CLIMATE***	3	165	4,3	0,65	597	3,98	0,83
4. POSITIVE FEEDBACK ABILITY***	2	165	4,69	0,52	597	4,52	0,65
5. STOP DANGEROUS WORK ABILITY**	2	164	4,8	0,51	597	4,65	0,58
PHYSICAL AND PSYCHOSOCIAL WORK ENVIRONMENT							
1. QUANTITATIVE DEMANDS*	3	164	2,43	0,99	590	2,6	0,85
2. COGNITIVE DEMANDS***	3	164	4,2	0,76	592	3,9	0,61
3. SENSORIAL DEMANDS	2	164	4,27	0,7	591	4,23	0,62
4. SENSE OF COMMUNITY**	3	163	4,35	0,68	591	4,51	0,49
5. SOCIAL SUPPORT***	2	163	4,13	0,8	590	3,76	0,72
6. INFLUENCE AT WORK	4	163	3,5	0,82	593	3,4	0,67

***. Independent Sample T-test is significant at the 0.001 level (2 tailed)
**. Independent Sample T-test is significant at the 0.01 level (2 tailed)
*. Independent Sample T-test is significant at the 0.05 level (2 tailed)

In phase two; the qualitative survey the results of GLOBE dimensions (Power Distance 1 and 2, and Assertiveness) and Trust scales (workmates and supervisors) are extracted. These dimensions are further presented below.

3.2.1 Results on GLOBE, Trust, and Safety dimensions

Power distance reflects whether the climate in the organization is dominated by hierarchical differences; whether employees in higher positions try to decrease or increase distance towards employees placed lower in the hierarchy, whether the norm is to question your boss when you are in disagreement or not. Assertiveness comprises two items which mirror the degree of aggressiveness and dominance in the organization.

Figure 4: GLOBE dimensions
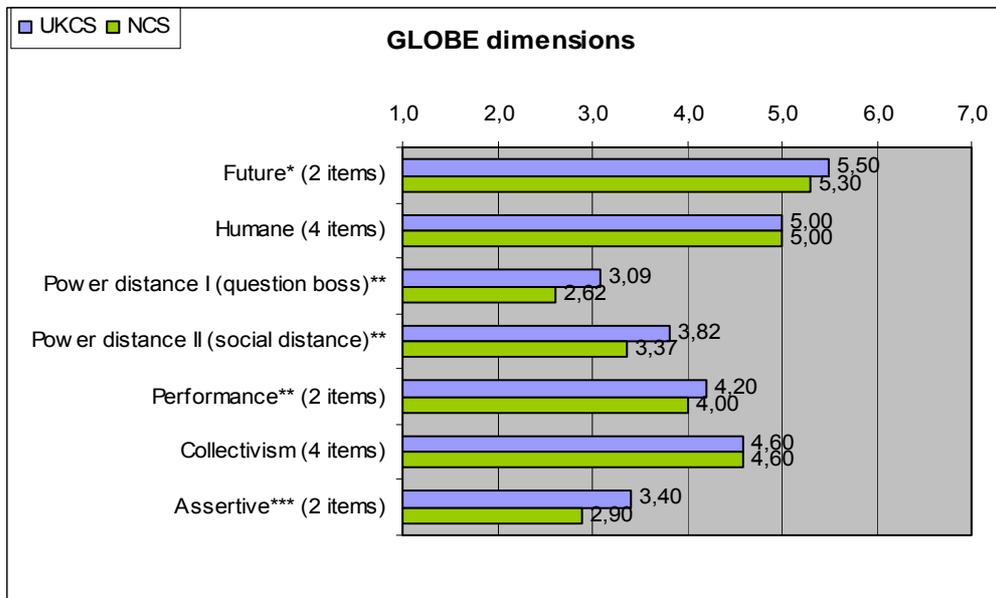
The scale goes from 1 (low) to 7 (high). Numbers reported in the diagram are mean scores for each shelf. The results within Power distance and Assertiveness show that the UK organization have higher level of Power distance and Assertiveness that the Norwegian.

Trust dimension measures items related to Trust in Workmates Commitment to safety and Trust in First Line Supervisor Commitment to Safety. The Workmate trust scale is built up of six items reflecting your belief in your colleagues; 1)whether they

care about my safety, 2)if they can be trusted to support me if I had a complaint about safety, 3)if I trust them to carry out their jobs safely 4) whether they would take credit for something they hadn't done, 5)if I can trust my workmates to be open and honest when it comes to mistakes they might have made, and 6)whether the workmates are afraid to stop if they think it is unsafe.

The next trust scale was directed to trust in your first line supervisor or your nearest leader. It contains five statements related to their supervisor's safety values; 1)if he/she is willing to listen to concerns I might have about safety, 2)if I trust my supervisor to be fair in the way he/she deals with safety incidents, 3)if my first line supervisor wants a job done safely even if it means extra time and cost, 4)whether I can trust my supervisors judgement when it comes to safety, and 5)if my supervisor emphasises safety publicly, but then cuts corners when carrying out his/her job. All in all, it reflects how deeply embedded 'true priority of safety' is in the supervisor's behaviour, by being actually reflected in practice (Tharaldsen et al., 2008a).

Figure 5: Trust dimensions
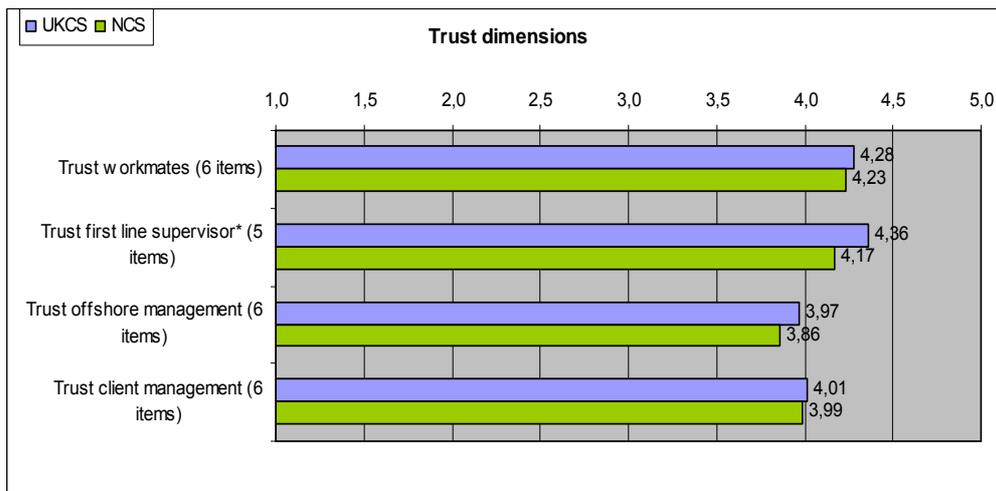
Scale: 1 (low) – 5 (high). The numbers reported in the diagram are mean scores for each shelf. The results show that both UK and Norway have high scores on all Trust dimensions. UK however has higher scores in both workmates and first line supervisors than the Norwegian Continental Shelf. There is also an opposite pattern where UK has most trust in first line supervisors, while Norway has most trust in their workmates.

In the HSE-questionnaire Safety performance is defined as: 1) whether the respondents had been involved in incidents or 2) near misses on 'this installation the last year' and 3) if they had suffered an injury in the last year without seeking medical attention. The figure below shows the distribution of the percentage of employees across shelves on these questions.

Figure 6: Involvement in safety incidents last year

	Involved in an incident on this installation the last year*** (%)	Involved in a near miss on this installation the last year (%)	Suffered an injury on this installation the last year without seeking medical attention (%)
UKCS	20,6	8,2	3,5
NCS	36,4	12,8	5,4
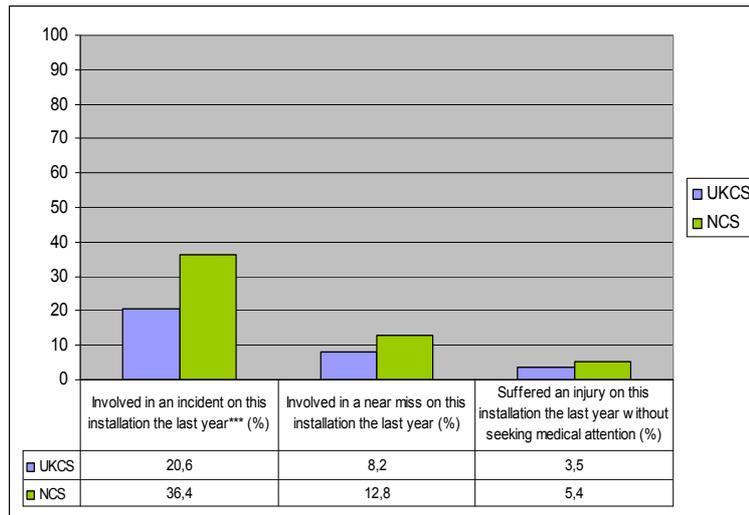
A significantly higher proportion of Norwegian employees reported involvement in incidents on their installation during the past year. Also, a higher share of the Norwegian respondents, report to have been involved in a near miss and suffered no injury without seeking medical attention. However, these differences are not significant.

3.3 Qualitative data

The aim of the second phase in the HSE-project is to further examine and interpret all the results from the quantitative study through workshops in the UK and in Norway, within a qualitative study This present study is a part of this phase and will include examining the following dimensions; GLOBE (Power Distance and Assertiveness), and Trust (Trust workmates, and trust supervisors). In addition, the results of the Safety performance results are used as a reference frame. The research questions are: 1). How may cultural aspects influence the perception of trust, safety and leadership? 2). How

may trust be related to safety? 3). Are leadership styles different across Shelves, and how may this influence trust and safety aspects?

In order to answer the research questions the research team made an enquiry to Seawells representatives in the HSE-project in UK and Norway about the selection of 10 – 20 participants for workshops, and four to five informants for focus-group interviews. Different functions and professions were to be picked randomly by the Seawell representatives. The researchers had no influence on whether the informants were rated as successful and skilful employees, or the opposite. An expert in the safety field in UK was chosen for the key informant interview.

A thorough preparation was completed before the interviews. Relevant literature and theory was examined. In addition, the preparation included participation in meetings with the project group, and participation in the planning of the focus group interviews and workshops. The program for the workshops and the questions for focus group- and key interviews are developed based on the results of the HSE- questionnaire, research questions and the theoretical framework. The purpose of the interviews was to reflect, discuss and have a dialogue about the constructs, and further enlighten and corroborate the results from the HSE-questionnaire.

3.3.1 Focus group interviews

The workshops are organized as structured focus group interviews in the UK and in Norway. In addition to gathering data to answer the research questions, a goal was to develop suggestions for further safety improvement/actions in the company. The program for the workshops included an introduction of the research project by the HSE representative from Seawell Ltd. The informants were requested to participate in the understanding, interpretation and reflection upon the results. To establish ownership within the company in regards to the results was also an outspoken goal. The HSE-questionnaire results were presented by Jorunn Elise Tharaldsen (IRIS); leader of the HSE-project. Focus group interviews were performed within four[1] groups. These were followed by plenary sessions, where detailed minutes and summarizes was written. These documents will be an additional part of my data. In the first group work four

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1 The plan was to have five focus groups working with their specific theme. Due to lower participation than anticipated we chose to take out one of the themes; Physical and psychosocial work environment.

dimensions were discussed and reflected upon. The themes were; 1. The GLOBE dimensions 2. The Safety behaviour dimensions 3. Reporting and intervention dimensions, and 4. Trust dimensions. The focus group interview will be completed within the group who discuss the Trust dimensions. The author is in charge of carrying through the Trust focus group interviews. Other researchers, one of the observers and a facilitator from the company, participated in the other groups. In the second group work further actions for improvements will be discussed and composed. At the end of the workshops actions for safety improvements will be exhibited, and distributed to the management in Seawell Ltd.

Trust dimensions and some of the GLOBE dimensions (Power Distance and Assertiveness) and safety dimensions are the starting point of the focus group interviews. Semi structural was completed; partly structured, but still quite descriptive and open. Themes and questions were decided upfront, but the informants chose different focuses in their discussions (Kvale, 1997). The aim is to have a collectivistic approach, and a dialog of the participants' attitudes, experiences, descriptions and beliefs regarding trust in relation to safety, leadership and national differences in UK and Norway. This includes interpretation and discussions of the concept trust, up- and downsides to trust and distrust in relation to safety performance, supervisors' and leaders role in trust relations, and national differences between UK and Norway. The discussions will be taped, and transcribed. Observation of the process will be an additional factor in the interpretation of the data.

Focus group interviews are in the literature defined in various ways. Features like organized discussion, collective activity and reflection, social events and interaction are included in most definitions. Focus group interviews are defined as*: "a research technique that collects data through group interaction on a topic determined by the researcher. In essence, it is the researchers' interests that provides the focus, whereas the data themselves come from the group interaction"* (Morgan, 1997 p. 6).

Madriz (2003) claim that focus group interviews are a combination between the traditional interviews and participant observation. Focus group interviews are a way of listening and learning from and about people. The approach is of a collectivistic nature that focuses on the participants' attitudes, experiences and beliefs. A goal for focus group interviews is to elicit a multiplicity of views and also emotional processes within the group context (Madriz, 2003).

3.3.2　Key informant interview

A key informant interview has been chosen in order for the researchers to extend the understanding and reflections of the theoretical approach of trust and safety. An additional aim is to understand and learn more about the culture in UK, and cultural similarities and difference betweens UK and Norway. Safety, Trust and GLOBE dimension are included in the interview, as are additional questions about leadership. The questions in all interviews were mainly the same in order to compare the answers. Conchie and Donalds Trust model (2007) was introduced and reflected upon in the key informant interview.

Key informant interviews are suitable in order to investigate how the informant interpret and understands different concepts and issues. The key informant interview can exploit the researchers' knowledge and interpretation of the theme, in addition to already existing reference frame (Jacobsen, 2005; Morgan, 1997). Key informants interviews may also quality assure the researchers views, hypothesis and opinions (Jacobsen, 2005; Kvale, 1997).

3.3.3　Data reduction and data analysis

Within an abductive and hermeneutic approach it is difficult to separate data reduction and analysis. *"(…) in fact, data collection, data reduction and data analyses can blend into one another in a cyclical process"* (Blaikie, 2000, p. 236). According to Blaikie (2000) a connection between approaches to paradigms, research strategy and method of data reduction is not necessary. Data reduction, analysis and presentation of results will be effected by choices based on the researchers' ontology, former knowledge, experiences, and life-world.

The transcription of the focus group interview in Scotland was challenging due to the dialect in Aberdeen, and this may have effected the interpretation. The workshops however worked like a quality assurance, where other employees and two additional researchers participated. To illuminate the research questions the data from the focus groups were transcribed, reduced and analysed. Blaikie (2000) explain different methods available to reduce or analyse collected data. Data reduction and analysis depends on type of research questions and objectives.

Methods of data reduction transform the raw data into a form, so analysis can be executed (Blaikie, 2000; Jacobsen, 2005). Categories were made in order to compare and analyse the data. Kvale (1997) describe five different methods for qualitative

analysis. These are categories according to; meanings, meaning coalescing, interpretation of meanings, structures of interpreted meanings and ad hoc methods for generate meanings. The data was reduced through meaning coalescing, a method used to deduct information and reduce the data. Long sentences have been compressed and summarized to shorter ones, but the meaning remains. Categorizing data is a form of abstraction of data in groups. Similarities and dissimilarities were found in accordance with the categories (Jacobsen 2005; Kvale, 1997). The categorizing has mainly been inductive; meaning that categories are made from the data collection from the interviews (Jacobsen, 2005). Research questions and theoretical framework has however been a foundation for the categories.

3.4   Ethical issues

Ethical issues in the Western ethical research discourse are according to Ryen (2004); codes and consent, confidentiality and trust. Codes and consent means that the informants know that they are being researched and the intention of the research. Confidentiality refers to the right to protect the participant's identity. Trust; demands a trustworthy behaviour from the researcher in regards to the informants, the research in general, and other researchers that will follow later (not spoil the field) (Ryen, 2004).

The survey is reported to NSD (Norsk samfunnsvitenskaplig datatjeneste).The major ethical issues in this project are related to the treatment of the respondents or participants in the HSE-questionnaire, focus group- and the key informant interviews. The participants' voluntarily took part in the questionnaire studies. The informant in the key interview is handpicked. The participants in focus group interviews were randomly picked by a Seawell representative, but work professions and levels are defined by the researchers. Information on the aim of the study and the data handling procedures are given to all participants.

The results of the survey and also from the focus group interviews will be confidential. Ethical considerations for focus groups are the same as for most other methods of social research (Morgan, 1997). While anonymity cannot be assured in a focus group, rules regarding confidentiality were provided. In the focus group interviews a form about confidentiality was distributed. Because of the small amount of informants in each focus group, some informants may recognize their quotation. Participants will be assured that no names will be identified and only extracts and

quotations from the interviews will be used in the research report. The anonymity issue must be taken into consideration when publishing the results. Prior to the interviews, permission for recording the conversations was requested, and the right to decline recording. They were informed that all recorded data will be deleted once the project is completed. The results of the HSE-project will be given to the participants through the Seawell representative. For the interview informants the results and the master thesis will be available.

3.5   Validity and reliability.

Reliability and validity is according to Jacobsen (2005) and Silverman (2001) important for both quantitative and qualitative research. Positivistic researchers claim that the only validity method is measured with numbers. In qualitative research some researches question to what degree validity is possible (Blaikie, 2000; Kvale, 1999). Description of social reality is based on the researchers' ontology. It is not possible to produce a complete picture and understanding within the interpretative approach. It may still be a goal to be as objective as "possible".

According to Kvale (1999) validity has to do with the consistency of the research. It is not limited to only the analysing of the results, but should be present in all of the research process. Validity may be divided into several types. Inter validity has to do with whether collected data and conclusions are correct. In this survey, validity affects all areas of the research process. Through a critical examination of the process, the internal and external validity was evaluated. The choice of theoretical framework and whether the theory is suitable to answer the research questions is important.

Factors that may influence extern validity are if the sample of informants is representative for the population, and if other research supports the findings (Jacobsen, 2005). Another factor is that the measures are not suitable in producing the correct information. A combination of methods may strengthen validity. In the HSE-questionnaire the sample was over 700 respondents. Within the qualitative survey the number of participants in the focus group interviews was 3 in Norway and 4 in UK. With a higher number of informants the results may have been more detailed. In relation to other gathered data, this data was however found to be satisfactory, valuable and reliable. HSE-questionnaire results and plenary discussions in workshops were additional insurance of the quality. Another factor with external validity is to what

extent it is possible to generalize the results from the research (Denzin & Lincoln, 2003; Jacobsen, 2005).

During the collection of the qualitative data, validity was important with regards to the interviewer's credibility and the quality of the focus group- and the key informant interviews. The transcriptions of the focus group interview in UK constituted a challenge due to conceptual validity. The Aberdonian dialect was sometimes difficult to understand. The data was been thoroughly analysed in order to get the correct interpretation. Within analysing and presenting the results logic categories was made based on the HSE- questionnaire, the research questions and interview questions. Validity is affected by interpretation and explanations, about being clear, evidently and convincing regarding analysing of the results, discussion of its relevance and conclusion validity (Kvale, 1997).

Reliability may be complicated in qualitative research, because the researcher will have an influence on the interviews. Semi structured interviews were completed, and to what extent other researches would achieve the same results is difficult to say. This is however not a goal for this survey. Reliability is a question about the data's credibility, and corroboration. Reliability in a research design refers to whether repeated measuring will give the same result in regard to what is being measured. Silverman (2001) describe reliability as the consistency with which instances that are assigned to the same categories, and if different observers or the same observer on different occasions find the same results. Focus group interviews may be limited in terms of their ability to generalize findings to a whole population, mainly because of the small numbers of people participating and the likelihood that the participants will not be a representative sample (Madriz, 2003). Reliability has to do with whether the measurements measure what they are supposed to, and if the picture corresponds with the real world (Silvermann, 2001). In this study the HSE-measures have been used in several other studies. To strengthen the reliability plenary discussion was carried out. A team of two researchers and the master student participated in the plenary discussions. Quantitative data from the HSE-questionnaire has further complimented, confirmed, validated or invalidated the results. Finally, the data has been treated carefully because of the difficulties with confidentiality and anonymity (Blaikie, 2000; Kvale, 1997, Ryen 2004). Reliability involves the researcher trying to explore, explain, describe and carry out the research process in an honest, trustworthy and reliable way. Some of the results seem to correspond with results from other studies, such as Conchie and Donald (2007).

The combination of the quantitative and qualitative worked well. Brannen (1992) explained the difference in methods in regards to looking to a narrow lens within quantitative research, or a wide lens in the qualitative research. The methods complemented each other and different aspects were found within the methods (Blaikie, 2000). The strengths of one method have completed the other in regards to achieve valid answers (Blaikie, 2000; Morgan, 1998). Quantitative result seems to have some capacities, while the qualitative has others. In this survey the focus group interviews seemed to give deeper and more complex data than the HSE-questionnaire. The HSE-questionnaire seems however easier to validate, according to the great amount of respondents.

3.6   The researchers role

The researcher had different roles in the key informant interviews and focus group interviews. In order to get the most information, the questions were carefully selected. The focus group interviews were completed in a semi structural manner. The role of the researcher in the interview was to guide the process and help structure the time. In addition to listen to the reflections and sometimes participate in the dialog. The third factor was to unravel and ask challenging questions. Information about; the aim of the interview, the research, information about confidentiality, taping (and deleting) the conversation, and the use of the data in posterity was given.

Although focus group research has many advantages, as with all research methods there are limitations. By its nature focus group research is open-ended and cannot be entirely predetermined (Blaikie, 2000). The informants in the interviews had different positions and power which may have affected the results and the interaction (Guldvik, 2002). The recorder may have caused hesitancy when answering some question, and the atmosphere may have been less open (Kvale, 1997). In the UK the answers in the beginning of the interview, were expressed in a very articulate way, almost strategically. It seemed like the answers reflected the values of the organization, rather than their own (Guldvik, 2002). As the interview moved on, the informants loosened up, and seemed more open and honest. The choice of a loose structure, lead to reduced control over the situation. The interaction went well, and the participants were focused on the topic most of the time.

In addition to eliciting a multiplicity of views, it was interesting to study the group processes. Interaction between informants highlighted the most important issues, and has been taken into consideration in the analysis and discussion. The choice of focus group interviews in two countries gave the opportunity to compare national differences.

In the key informant interview the questions worked well, and a structured dialog was completed. In order to compare results, data was collected and analysed mainly in accordance to the same structure as the focus group interviews. The key informant interview was more structured than the focus group interviews (Jacobsen, 2005; Morgan, 1997), and has some additional questions. In order to have some control over the interview the researcher took an active role, and tried to challenge the informants' answers. The informant is an expert in the field, with specific knowledge about the issues being researched. She had prior knowledge to Conchie and Donald's Trust model. Her interpretation of the model, lead to new reflection, perception, and novel knowledge on trust, safety and cultural issues.

Quantitative and qualitative methods have different ontological perspectives. With an abductive and pragmatic approach this has lead to additional reflections about inter-subjectivity, and what reality is. Creswell (1994) claimed that there is a false dichotomy between the methods. This statement is agreed upon in this study. The learning and research process during the study, has been partly accomplished within different sequences, in Phase one (HSE-questionnaire) and two (qualitative survey). Combining methods has supplied the results with an expanded perceptive. The methods has provided different data, as well as been an instrument for validating the results.

The research questions were answered through an abductive strategy (Blaikie, 2000), with an interpretive approach to the research questions. A hermeneutic approach has been executed, were the understanding has moved in circles (Debesay et al., 2008). New data has generated new reflections and new knowledge. The aim was to explore and understand the informants' meanings. In order to achieve this, the researcher had to listen very careful, and also ask questions to follow up if necessary. Categories of meanings were made on the basis of the understandings and explanations from the informants and the researcher (Blaikie, 2000). The theoretical framework has worked well, and been an important source for reflection and discussion.

4 Qualitative results and discussion

This chapter present the results from the qualitative data collection and discuss the research questions in connexion with results form HSE-questionnaire (presented in chapter three) and the theoretical framework. The aim is to discuss the questions: 1). How may cultural aspects influence the perception of trust, safety and leadership? 2). How may trust be related to safety? 3). Are leadership styles different across Shelves, and how may this influence trust and safety aspects?

A model is produced to help understand the relations between culture, leadership and values and practices within safety performance. The qualitative sample and informants are presented in table 4.0. Various developmental and contextual factors may influence and differentiate the result. Results from the focus group- and key informant interviews in UK and Norway are presented within categories. Cultural differences regarding trust relations to supervisors, workmates and leadership are elaborated. Further, the content of the trust concept will be discussed. How Seawell employees in UK and Norway explain trust and distrust in relation to safety is then presented. At the end of the chapter a reflection about trust, safety and a combination of leadership styles are performed.

Presentation of the results follows a similar pattern across the chapter. First relevant citations are extracted from the UK data on a specific theme, then follows Norwegian employees' statements on the same issue. This way comparisons are (similarities or differences) are made more explicit. Some of the comparisons are complemented with reflections from the expert interview. Finally, the theoretical framework has been a reference frame in understanding the results.
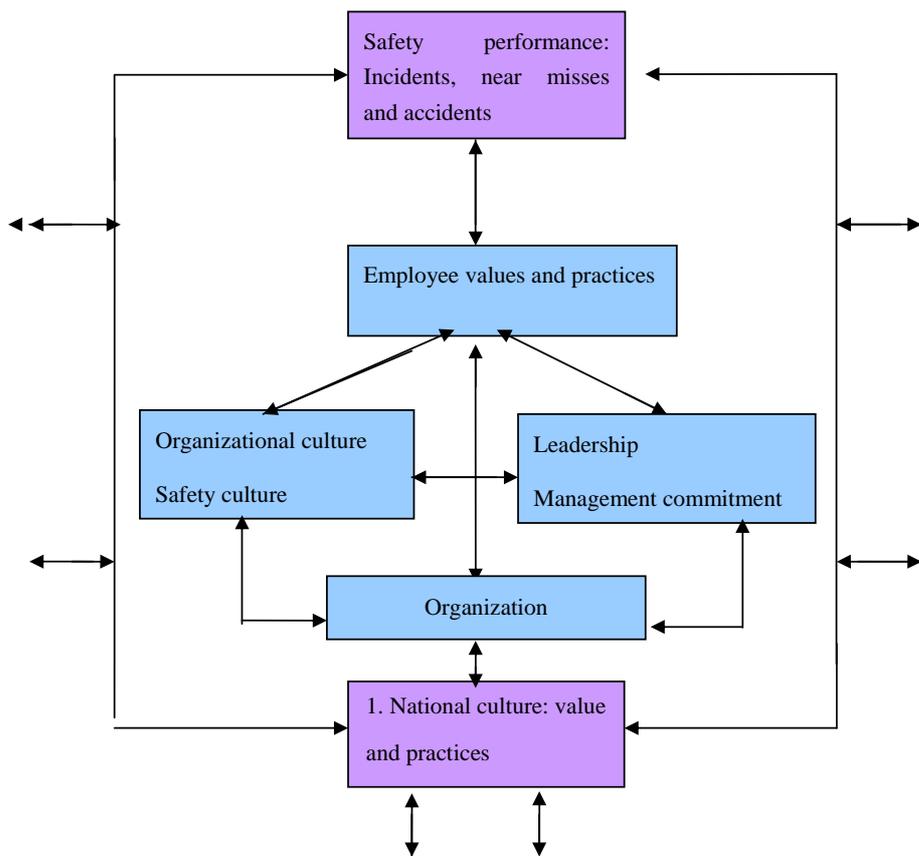
Figure 7: Mediated Relations between Culture, Management Commitment and Values
& Practices on Safety performance.

This model is developed to show the anticipated and mediated relations between national culture and the organisation culture; employees' values and practices, management commitment to safety, leadership and organisational safety performance. These factors are supposed to have a direct or an indirect (mediated) impact on employees' values and practices and safety performances. The arrows on the sides, explain other factors that may influence organizational processes.

The informants within the qualitative study are presented in the table below.

Table 4: Sample and informants

Method	UK	Norway	Employees positions
Key informant interview	1		Expert on safety culture and safety climate, University of Aberdeen, Scotland
Focus groups; plenary sessions in the UK	15		2 Rig Managers and 1 HR Advisors, 1 Main Supervisor, 1 Roughneck, 1 Roustabout, 2 Floorman, 2 Assistant Driller, 1 driller, 1 Derrickman, 1 Electrician, 1 Day Toolpusher, 1 Deck foreman.
Focus groups; plenary sessions in Norway		15	1 Safety delegate - coordinator, 1 Manager of HSE & Quality, 1 Chief Executer Officer, 1 Operation Manager, 1 Engineer, 2 Senior Toolpusher, 1 Roughneck, 1 Roustabout, 2 Toolpushers, 1 Safety delegate, 1 HSE-leader - Engineering, 2 Wireline operators - Safety delegates.
Focus group interview, on Trust in UK	4		1 Assistant Driller, 1 Deck Foreman, 1 day Toolpusher and 1 Roustabout
Focus group interview on Trust in Norway		3	1 Senior Toolpusher, 1 Toolpusher, 1 Wireline operator – Safety delegate.

4.1 Developmental and contextual differences

The Oil and Gas Industry in the North Sea has developed rapidly in the last 40 years. The history of oil drilling in the North Sea may according to Haukelid (2008) be divided into four stages; Texas (1960-1980): Wild and rough "macho culture", The Great Change (1980-1990): Implementation of internal control and other safety measures, The Systems (1990-2000): Introduction to comprehensive systems and The Cultural Solution (2000-present): Safety culture is the new concept, and different measures are introduced. For many years the oil industry has been a 'macho-' and male dominated culture where taking risks was seen as macho and tough behaviour (Haukelid, 2008; Means & Yule, 2008; Tharaldsen et al., 2007; 2008b). In order to decrease accidents and generate higher safety performance among the employees, this had to change.

The drilling contractor organization Smedvig, has a long history in Norway. The company is originates from a long line of ship-owning activities dating back to 1915. Smedvig was involved in the oil industry in Aberdeen from 1976 to 1999, left for a for a four year period and then started businesses in the UK again in 2004. In January 2006, Seadrill acquired Smedvig.. In October 2007 a separate entity for its well services

activities was established. The aim was to create a large international well services company. The new company named Seawell Limited is a company providing well services within platform drilling, engineering and well intervention. The services include production drilling and well maintenance services on several platforms, concept studies, drilling facility upgrading and modifications as well as mechanical and electrical wireline services. Health, safety and environment (HSE) have a high priority within the company, and are an integrated part of all Seawell activities. The object is to establish and maintain a safety culture where there is no accidents, injuries and losses (http://www.seadrill.com/). Organizational change and acquisitions has had no implications on the accomplishment of the HSE-project.

Some important issues must be taken into consideration when discussing the results. As explained above the company has long traditions in Norway. This may effect the employees' identity, the organizational- , and the safety culture in the company. In addition there are organizational differences between the UK and Norwegian Continental Shelves. One important difference is their rotation and platform stability. Shift rotations in UK are mostly 2 weeks on and 2 weeks off, where as in Norway shift rotations are 2 weeks on and 4 weeks off. In addition the types of shifts and their rotation pattern differ between shelves. A fairly high proportion of the employees in Norway work Roll over shifts, with 7 nights/7 Days or reverse. This is a non-existent shift rotation among Seawell employees in the UK. Wireline is not a part of the Seawell activities in UK, but they constitute a substantial group of employees in Norway. 43% of the UK employees report to work each tour on the same installation, against 69% of the employees in Norway. All in all this means less variation in shift rotation types in the UK than in Norway, and a more nomadic (moving between platforms) work life for UK workers than Norwegian workers.

Other factors that may influence on the results include the different consequences of absence from work because of injuries or illness. The welfare regulations are different in the UK where income decreases if employees have a medical certificate. Another difference between the UK and Norwegian Shelves is that there is more automation on the Norwegian Shelf, and more manual work on the UK shelf.

With regards to reporting systems and traditions there are some similarities and some differences between the two countries. The main HSE systems are on a corporate level, and are the same in both countries. These are Step Change (Strengthen the HSE-leadership, Risk identification and evaluation, Follow up- and measure, and Improve the

control system) and TEMPO (Values about: adjusting the pace of operations taking knowledge, competence, equipment into considerations, and make time to do necessary inspections and risk assessments). Activities and actions related to these programs are executed differently. We may take into consideration that the respondents on the Norwegian Shelf report higher Reporting Willingness. However, the Norwegians also report significantly higher Risk Taking Behaviour than the UK respondents. This may be a reflection of an actual difference in Safety performance.

Other factors that must be taken into consideration when interpreting the results are that more leaders answered on the UK sector. This may indicate that the sample in the UK is slightly biased in favour of managers. Management is shown to have a more positive view on different organizational aspects and safety, so this has to be taken into account when interpreting the results (Tharaldsen et al., 2008a). These factors may influence the results in different ways. However, when checking for differences between leader and others employees' responses on all dimensions, less differences between leader and workers were found in the UK sample than in the Norwegian sample. This may indicate a higher degree of homogeneity in attitudes and perception in the UK than in Norway.

4.2 Reflections on cultural differences and similarities

In the focus group interview the informants reflected upon national differences in relation to (differing or similar) results on the GLOBE dimensions (Power distance: questioning the boss, and social distance), Assertiveness (aggressiveness, dominance) and Safety performance (involvement in incidents, near misses and injuries). GLOBE Power Distance reflects to what extent a community respects and endorses authority, power differences and status privileges, and to which degree individuals in organizations expect or agree that power should be unequally shared. Assertiveness includes; if people are encouraged to be assertive, tough and confrontational, or the opposite; non aggressive and tender in social relationships (House et al., 2004).

The UK employees found national differences difficult to reflect upon since none of them had knowledge or experience from Norwegian platforms and, hence, Norwegian work practice. The UK informants focused on their own practice and what the differences in results might reflect. Some of the participants in the Norwegian focus group had previous experience of work on UK platforms, and with UK employees. In

Norway, one of the Seawell representatives from UK participated in the discussions and was able to answer questions from the Norwegian participants regarding understanding of the results and differences between practices and regulations on the two shelves. This most likely influenced the Norwegian informants' reflections, understandings and interpretations of the results.

The informants were asked about cultural difference and similarities on the UK and the Norwegian Continental Shelved in general.

Table 5: GLOBE discussion in UK

"Company values must fit the culture. You cannot inflict your values on an alien country, they will not accept it. It is probably the same values in both countries, safety first is the consistent value"
"The new values are tools for behaviour, and have changed the culture the last ten years, TEMPO is very good."
"The change started on the rigs themselves and developed further. It was a bottom up process…."
"The culture is based on mutual trust and respect. Before it was more `every man for himself`, and `how can I make myself look good`?"
"Production used to be more result driven before, now safety is the number one priority. None of the guys feel uncomfortable about stopping the work."
"There is no more bully culture. Well it is different from platform to platform. There are still shouting and screaming on X Platform."
"The result about not questioning the boss in UK is surprising. It is easier to challenge now. We feel more confident now then we used to. It is easier to approach the boss; the gap is closing."
"In Norway the leaders are more easy-going, and equal to workers. Here in the UK we look more up to leaders. There is not such a gap in Norway."
"It is more relaxed here now, we respect the leaders. We are more like a team now. There are not so much: "do lists" as before. We take the time now, and TEMPO is brilliant."

Table 6: GLOBE discussion in Norway

> *"UK may have changed safety culture the last years, maybe what we think are myths."*
>
> *"We are in front of them on many things."*
>
> *"We can learn from them, and use procedures more critically; maybe we trust the system too much."*
>
> *"In UK they focus on the leaders values, that they think safety first... This must have changed the crew and the atmosphere on board. It seems like an active cultural change has been performed."*
>
> *"They still follow the rules more in UK, and that is good in some situations."*
> *"The door to the leader is always open here, everyone is equal."*
>
> *"Maybe the Norwegians question their boss too much. They don't always do as they are told... tja...It can go to far the other way in Norway, you can't just go on an on. In Norway they get sceptical when they are told. This is different from UK."*
>
> *"Maybe UK leaders are more authoritarian, and this creates `hierarchy efficiency`. They do as they are told and follow the rules and the procedures, better than we do."*

Table 7: Key informant reflections regarding GLOBE dimensions:

> *"It can have to do with power distance In UK there is more individualism, and in Norway collectivism."*
> *"The history is different. In UK we had the industrial revolution, class system, people are not treated equal".*
> *"In Norway it is closer to nature. It is socialistic, and everybody is equal."*
> *"There has been a major focus on values the last few years. Step Change has made a big difference in UK. After Piper Alpha something had to be done. Step change was something totally new, a cultural event. It included new values and a new direction at all levels. It was very highly prioritized by everybody, including the union."*
> *"In Norway, they had something called: Cooperation for safety. It was not so offensive and not a major step or a big change in Norway. I don't know if it still exists."*
> *"The focus on Step Change is still going strong, especially for the leaders. It has lead to a change in the way they do things."*

The HSE-questionnaire study found significant differences regarding the GLOBE dimensions: Power Distance and Assertiveness. On a Likert scale from 1 (low) to 5 (High) the UK mean score is 3,09 on Power Distance 1 (question boss), while in Norway the mean score is 2, 62. Power Distance 2 (social distance) is rated 3,82 of the UK employees, and 3,37 with the Norwegian employees. In regards to Assertiveness the UK have a mean score on 3,40 and Norway 2,90. UK employees scored higher on all of these dimensions. The HSE-questionnaire also found that Norwegians question their boss more when in disagreement than their UK colleagues (Tharaldsen et al., 2008).

Another question in the interviews was about differences found in the HSE-questionnaire about trust relations to workmates and supervisors. The UK Seawell informants found it difficult to compare Norway and UK. UK employees decided to mostly stick to their own field of experience and mostly discussed internal matters. Norwegians also found it most meaningful to reflect upon their own practice and experiences, but also discussed UK matters, and national differences.

Table 8: UK results regarding Trust in supervisors

"There used to be no trust in leaders and no cooperation. This has changed due to leader training and a great focus on values. Management has changed their attitude and do now reflect new values. We respect each other and that has increased mutual trust."
"Supportive leadership promotes trust, and the attitude towards boss is now much more positive."
"Leaders are more experienced, and things are more discussed now."
"They have more patience now and have time to help us and explain things."
"I think roughnecks have the least trust in managements. They receive orders."
"It is personal, there are different leaders on different platforms, some things comes down to individuals, you wait until the right boss comes on."
"Supervisors commitment to trust is very important for safety."
"We need leaders with academic skills, as well as practical skills."

Table 9: Norwegian results regarding Trust in supervisors

"Leaders commitment means a lot, they must be good role models."
"It is different leaders on different platforms, it varies."
"Their leader culture is totally different. I have been on their platforms, and I can't understand that UK workers have more trust in their leaders than us, when there is a cowboy culture - shouting and screaming. But it is a long time ago and it might have changed the last years. Maybe it is a myth, that we think we are better than them."
"Maybe it is a different kind of trust in UK, an "artificial trust", I can`t explain how it is. Do they "kiss their bosses ass" more than we do?"
"They have more respect for their boss in UK, they look up to their leaders, they are not close with their bosses."
"In UK they do as they are told, more than we do. The trust they have in UK is about competence and authority."
"I am a leader, and there are different ways of talking to people. Sometimes I use "we should do this…", but when I say "you have to" - the workers look at you strange. Here the leader is one of the boys. It can be too much the other way too. Sometimes they must take an order. It is good and bad to be one of the boys."

Table 10: UK result regarding Trust in workmates

"I think we have less trust in workmates because of competition, we are not competing with the supervisor, their role is quite clear."

"If you get support it promotes trust."

"You need to have trust in the team, all you need is one person to fail. It is like a chain, you are no stronger than the weakest part. This is a part of Seawell's values."

"Steady teams are important; we don't want to change that."

"We work closer together, know each other better than in Norway, because we work two weeks on and two off, compared to the Norwegians that have four weeks off. Such elements build trust."

"We have more manual work than them; this may also contribute to increased trust."

Table 11: Norwegian results regarding Trust in workmates

"We trust the persons most that we know best."

"The longer distance in the system the less trust, you care most for the people in the crew. When you know a person trust comes automatically."

"We are very well off in Norway. We don't have to compete, or climb the ladder."

"Maybe we score lower than UK, even though we feel the same, we are spoiled."

"They know each other more in the UK."

"They (UK) work closer; they have more practical work, cooperate, and talk more."

"If you know your partner will lose money if he gets sick, like they do in the UK, and you care for him, you will confront him if he is doing something risky."

Table 12: Key informant answers regarding Trust in workmates and supervisors

"There are not big differences, the difference in trust in supervisors are little. The result may be because of the last year focus, and that supervisors have had special training."
"More people in Norway answer (600) and more leaders in UK than in Norway answered. Leaders tend to answer in favour of management. Because of this we must be careful to interpret the results, and think about who was in their mind when they answered."
"Power distance answers a lot of these differences. Norway has a flatter organizational structure. In UK they have more respect for their supervisor and there is more hierarchy in UK. I think in the UK they have more trust in supervisors' ability."

"The leaders' commitment has a major effect, all research shows that this is the most important, we have the evidence. Good safety climate leads to high safety performance.
"When it comes to safety values: the managers' attitude sets the tone. If the senior leadership has strong safety values it might also have the effect on the lower levels. Iit goes down in the system."

> *"The ones who have a personal story regarding safety issues have a stronger commitment. It can be that they have lost a friend, or are responsible for somebody's accident, or had a near miss – or have been involved themselves."*

The HSE-questionnaire found that trust relations towards workmates and supervisors in UK and Norway were different. On a Likert scale from 1 (low) – 5 (high), UK reported a mean score on 4,28 on trust in workmates commitment to safety, and Norway 4,23 on Management commitment to safety. The UK respondents scored 4,36 against Norway with 4,17. UK employees showed higher scores on both dimensions. However, the UK workers appear to have a slightly higher trust in supervisors than in their workmates (Tharaldsen, et al., 2008). These differences are small and may not be significant, but may express a tendency.

The qualitative data complements the results of the HSE-questionnaire, about difference in trust relation on supervisors and workmates. One of the UK informants discussed that: *"In Norway the leaders are easier going, and equal to workers. Here in UK we look more up to leaders. There is not such a gap in Norway"*. In Norway the pattern was the opposite. The Norwegians had more trust in their workmates than in the supervisor. One of the informants claimed: *"We trust the persons most that we know best"*. The Norwegian informants seem to agree that relational bonds are important for trust relations (Lewicki et al., 2006; Spurkeland, 2005). UK employees seem to look more up to their leaders than their Norwegian co-workers, but assert that they now find it easier to approach managers than they used to.

There seem to be a difference within the relationships between supervisors and workers in the UK and Norway. The Norwegians claim that UK has a different culture, leadership style and that their trust in their supervisors is of a different kind, than in Norway. Hence, UK employees seem to trust their supervisors in a more cognitive, respectful and authoritarian way. Less trust in workmates is by the UK informants explained with competent supervisors, and also with the fact that there is competition between colleagues. Many workmates are aiming for higher positions.

In regards to the difference, on Power distance 1 (question boss) one of the UK informants claimed: *"The result about not questioning the boss in UK is surprising. It is easier to challenge now. We feel more confident now then we used to. It is easier to approach the boss; the gap is closing."*

In Norway the employees stated that the supervisors often are one of the guys, and that workers are equal to the supervisors. Two of the Norwegian informants had worked on British platforms before and discussed that: *"Maybe UK leaders are more authoritarian, and that this creates `hierarchy efficiency`.* One of the Norwegian informants stated: *"Maybe the Norwegians question their boss too much. They don't always do as they are told... tja...It can go to far the other way in Norway, you can't just go on an on. In Norway they get sceptical when they are told. This is different from UK".* The Norwegian informant used the construct *"hierarchy efficiency"* about the Power distance 2 (social distance) between leaders and workers in UK, and claims that this factor might be important for safety performance. They discuss that sometimes it is necessary for employees to be told what to do, and just do it! This is especially important when it comes to compliance with procedures and regulations. Reason (1997) explains that most accidents are a result of procedures not being followed. One of the Norwegian informants expresses his opinion of the UK employees: *"They still follow the rules more in UK, and that is good in some situations".*

The key informant explains cultural differences regarding trust relations like this: *"It can have to do with power distance. In the UK there is more individualism, and in Norway collectivism. Their history is different. In the UK we had the industrial revolution, class system, people are not treated equal. In Norway it is closer to nature. It is socialistic, and everybody is equal.* The results from the focus group interview support her statement. The history and the different traditions may explain some of the differences (House et al., 2002; 2004).

The results of the HSE-study appear to be supported by the GLOBE cross-cultural studies. GLOBE cross-cultural study has established clusters of cultures, like the Anglo and the Nordic Europe cluster. There are no aristocracy in any of the Scandinavian countries. Norway is characterized by long traditions and history of valuing equality and democracy. House et al., (2004) found that the Nordic Europe Cluster is identified by high Collectivism, low Power Distance, low Assertiveness, and low Masculinity. Future Orientation, Gender Egalitarianism and Uncertainty Avoidance are also supposed to be high in these countries. Anglo cluster is characterized by high scores on performance orientation, and low scores on In-group Collectivism. They are characterized by higher scores on Assertiveness, and a higher Power Distance than within the Nordic Europe cluster. House et al., (2004) state that UK supervisors are thought to be more assertive and authoritarian than Nordic Europe Cluster.

In cultures with high Power Distance, like the Anglo cluster, superiors are according to House et al., (2004) encouraged to demonstrate and exercise power. Subordinates are expected to be passive and follow instructions and orders. Organizations are characterized as hierarchical and decision-making is centralized. In low Power Distance cultures, like the Nordic Europe cluster, the relationship between supervisors and subordinates is supposed to be closer. The organizational structures are in general flatter and subordinates are more involved in decision-making (Carl et al., 2004). High Power Distance cultures are often more top-down administered and bottom-up in low Power Distance cultures

According to the UK informants there has been a change in leadership style and organizational- and safety culture in the last ten years. Some of UK informants had worked in the Oil Industry for many years, and had been a part of a change for the better within trust- and safety relations. One of the UK informants stated:

"There used to be no trust in leaders and no cooperation. This has changed due to leader training and a great focus on values. Management has changed their attitude and do now reflect new values. We respect each other, and that has increased trust".

Values like mutual respect, teamwork and delegated responsibility are used in the UK description of the leaders. Seawell leaders in both UK and Norway have completed several leader training courses. New safety programs have been and are still being accomplished (Step Change, Tempo, among others). The focus on values and leaders training may have affected the trust development in supervisors.

The UK informants discussed how much the values had influenced the power distance, and that the safety culture had changed. *".* Tharaldsen et al., (2008b) highlight safety culture as collective practices that both protect the individual and the environment. Having a strong safety culture is necessary for safety. This involves shared perception, and compliance of rules and regulations (Jeffcott, et al., 2006; Reason, 1997).

UK has had special focus on new leadership values and performance. The strong focus on leader skill upgrading in UK may have increased leaders engagement and commitment to safety. In Norway the employees may be accustomed to this leadership style, because of a long history and strong organizational culture. It has been `patterns of behaviour` like Fonseca (2002) called it. The organization is still quite new in the

UK, and it seem like there has been an improvement in leadership. Further research in UK and Norway is however necessary to explore this issue. Both nationalities reported however individual- and platform differences regarding trust, management and commitment. These finding are supported by results from the HSE- questionnaire who found that; it matters where you work (Tharaldsen et al., 2008a).

Seawell organizational (corporate) safety culture may affect the level of trust in supervisors and workmates. The Seawell organization and their leaders, have strong traditions in Norway. The factor that Seawell is relatively newly established in the UK, does most likely effect the organizational safety culture, and also the level of trust in supervisor and workmates. Alvesson (2002) views organizational cultures as open and dynamic systems where common meanings and symbols are shared. It takes time for new values to establish and be a part of the shared perceptions and the organizational culture. Jeffcott (2006) argue that safety culture is about the employees' practices, and how the organization is able to adjust it in either a positive or negative direction. This has most likely in turn changed the workers norms and behaviour and a new HSE- and safety culture in the UK may be developing.

In the qualitative interviews the informants agreed on the importance of the supervisors' commitment. In UK they stated: *"Supervisors commitment to trust is very important for safety",* and in Norway: *"Leaders commitment means a lot; they must be good role models".* The key informant strongly supported this view. Mearns et al. (2001) refer to Rundmo (1994) who found association between accident frequency, and factors such as management and employee commitment to safety, safety attitude, social support, and satisfaction with safety measures (Means et al., 2001; Mearns & Yule, 2008).

Even though the UK informants claimed that the gap between leaders and workers is closing, there seems to be differences on Power- and Assertiveness both with regards to the quantitative results and the way these dimensions are reflected upon by the UK and Norwegian Seawell employees.

Different organizational regulations in the UK and Norway may also have an effect on trust relations. The UK employees spend more time together on the platforms and this may result in stronger fellowships and that they may know each other better. Then again, the Scandinavians are known to be more collective minded than their UK colleagues (House et al., 2004), and may have emotional bonds that are as strong as their British colleagues. According to Lewicki et al., (2006), the levels of trust change

as the individuals interact and experience each other in different ways. Trust depends on frequency, challenges and strengths of the relational bonds developed within relationship (Lewicki et al., 2006; Spurkeland, 2005). The differences in trust relation toward supervisors and workmates may also be explained in by Power Distance and Assertiveness differences between UK and Norway.

Variations in Power distance and Assertiveness may explain why there are differences in relation to trust in supervisors. Cultures scoring high on Assertiveness are according to House et al. (2004) more tolerant of strong directive leadership than cultures rated low. The cultures that are low on Assertiveness will prefer a more consultative leader ship style (House et al., 2004). The discussion of how globalization will effect organizational values, performance and trust relations is relevant. Can differences in trust and leadership style be explained by organizational culture (even within the same culture), or do cultural values like Power Distance and Assertiveness influence the employees trust relations? According to House et al., (2004), the cultural values will influence the employees' values and behaviour. Mearns and Yule (2008) would most likely focus on the UK leaders' commitment. Further research is necessary to investigate these complex circumstances more deeply.

4.3 Trust

The UK and Norwegian informants includes some of the same and some different elements when discussing the concept trust. This was also the case with regards to the upsides to trust.

Table 13: Focus group results regarding the Trust concept.

UK	Norway
"Trust has to do with respect. You respect someone if you trust them."	*"We have most trust in the people we know best and care for."*
"Trust takes time and need to be build."	*"You have trust if you rely on someone."*
"We trust in people with knowledge, if they help you and give you information."	*"Trust can involve respecting people."*
"Trust binds communities, when people interact and care for each other"	*"There are different kinds of trust: trust based on knowledge and out of experiences."*
"Trust comes down to persons. It is a personal thing. When you like a person it is easier to trust him."	*"If it is people you know, you can call it social trust; you bond with the people you trust."*
"Trust is linked to responsibility and experience."	*"You trust people if you count on somebody's knowledge."*
"Trust allows you to reach new levels."	*"I trust new peoples skills, but I don't trust them with the other trust – the social trust. This is when you know them."*
"Trust is different in various settings, it depends on how much you know people."	
"Trust help to protect people, and give them a voice."	
"Trust can break down barriers."	

Table 14: Key informants reflections of Trust:

"I lean upon Mayer definitions that trust is willingness to risk, make yourself vulnerable and look out for others interests. It involves integrity, competence, benevolence"
"But, we can often say, or think that we are more trustworthy than we really are... Calvin used the concept: explicit and implicit trust in a survey, and found support for this statement in a indirect measure of trust. When you don't have to think, people are more honest, and more reliable data is found."

The results show that UK- and Norwegian informants emphasise the importance of trust in relation to safety. The HSE-questionnaire shows high level of trust in relation to workmates and supervisors on both shelves. In the qualitative survey the interpretation

of trust and upsides to trust, includes different highlighting within the informants. Both nationalities included respect, knowledge and experience when they defined trust (Cognitive aspects). To support one another-, look out for-, care for-, rely on and count on each other (Affective aspects), is regarded as crucial for safety performance and the development of a good safety culture. Different elements within trust are identified in the sense of personality differences and how well you know the person, as in a transformational approach (Lewicki et al., 2006).

In the focus group interview the informants stated: *"Trust is linked to responsibility", "Trust allows you to reach new levels", "and Trust helps to protect people, and give them a voice." and" Trust can break down barriers"*. Trust is also in the interviews and in the literature seen as a complex construct (Conchie & Donald, 2007, Lewicki et al., 2006; Seppanen et al., 2005). The UK and Norwegian employees both include elements like: *"respect, knowledge, care, responsibility and expertise"*, their interpretation of trust. The informants state that there are individual differences regarding trust relations and the development of trust. Interpersonal relationships are important for mutual trust (Spurkeland, 2005) and this is highlighted within both the UK and the Norwegian employees.

According to the theoretical framework trust may be divided in cognitive-, affective- and behavioural trust (Lewicki et al., 2006). Both groups include all three aspects in their explanations of trust. Cognitive aspects like *"respect, knowledge and information"* are used in their definition of trust. Further they claim that Affective elements like*;" to support one another, look out for, care for, rely on and count on each other"*, are crucial for safety performance and development of a good safety culture. Behavioural factors are explained with reciprocal trust, based on *"how well you know the other"*.

The results show, however, some tendency to disagreement with regards to the perception of the trust concept (Portinga & Pidgeon, 2005; Sako & Helper, 1998). The Norwegian results appear to emphasise issues like `knowing the person`, and relational factors in their definition of trust (Cox et al., 2006: Lewicki et al., 2006). Norwegian employees discuss the different kinds of trust you may have in different people. One of the informants calls it *"social trust"* and relates it to good knowledge of that person. The former trust seems according to the theoretical framework to emphasize and be categorized within a transformational approach with emphasis on Affective and Relational trust (Seppanen et al., 2005). Rousseau et al. (1998, in Lewicki et al., 2006)

named this kind of trust Relational Trust (RT). The informants claimed that a certain level of interaction must take place before you develop this kind of trust. McAllistars (1995) defines relational trust as a feeling of reliability and dependability developed from previous interactions with the trustor. It also includes emotional bonding (McAllistar, 1995 in Lewicki et al., 2006). This understanding of trust seems to correspond with the Norwegian workers explanation of what they called "*social trust*".

The UK informants state that: *"Trust has to do with respect; you respect someone if you trust them"* and *"We trust in people with knowledge, if they help you and give you information"*. The understandings of trust appear to focus on respect, information, knowledge sharing and integrity. The key informant seems to agree with the UK employees in her definition of trust as: *"willingness to risk, make yourself vulnerable and look out for others interests. It involves integrity, competence, benevolence"*. Their definition seems to be related to what Lewicki et al., (2006) calls cognitive trust, and to Conchie and Donalds (2007, p. 2) definition of safety-specific trust as: *"as a person's willingness to rely on another based on positive (...) expectations about their safety behaviour, or intention to act safely"*. Cognitive trust reflects issues like ability, benevolence and integrity, and includes judgement of another's trustworthiness. Care and concern is included in the definition, but respect and competence is more underlined. Connection may also be made to Lewicki and Bunker (1995, 1996) concept Calculus Based Trust (CBT), and rational emphasis of trustworthiness. Rousseau's (1998) definition of trust includes a cognitive process that accepts vulnerability, but also includes positive expectations of behaviour (Rousseau, 1998 in Lewicki et al., 2006).

Norwegian informants seem to give higher emphasis on Affective and Relational elements of trust, while the UK informants tend to put more focus on Cognitive elements of trust. The different perceptions of the concept of trust may also have an effect on the discussion in chapter 4.2.1 Trust in supervisor and workmates. The results indicate that the trust UK employees hold towards their supervisors may be different from the trust Norwegian employees have in their superiors. The UK seems to highlight more Cognitive elements of trust in relation to their supervisors, while Norwegians appear to highlight more Affective elements.

All in all this study explains trust as a complex construct which has various perceptions and dimensions (Lewicki et al., 2006; Seppanen et al., 2005). Rousseau`s et al., (1998 in Lewicki et al., 2006) views about trust as a multidimensional construct that varies in range and character, supports this study. The concepts Calculus Based Trust

(CBT) and Relational Trust (RT) are seen as the core elements and understanding of trust in the transformational approach. CBT are mainly based on cognitive decisions in the sense that we must "trust by verify", and RT is related to care, concern, and emotional bonding. RT seems to be similar to the affective trust, based on interactions within relationships (Lewicki et al., 2006). The results of both the quantitative and the qualitative study appear to show national inconsistency in regards to levels of trust.

4.4 Trust and safety

Most safety literature assumes that trust is positive for developing a good safety culture, and that distrust is negative. This statement is questioned in recent studies (Burns et al., 2006; Conchie & Donald, 2006b; 2007; Jeffcott et al., 2006). Conchie and Donald (2007) Trust model of functions of safety specific trust and distrust (chapter 2.2.3) is meaningful in explaining and understanding the complex trust concept in relation to safety. Trust is perceived within the two-dimensional perspective, and trust relations are explained within four categories: Dysfunctional and functional trust and functional and dysfunctional distrust. The qualitative results will be transferred into this model in order to understand and explore Seawell employees' perception of trust and safety. The results on Trust are presented and discussed in chapter 4.3, and therefore not fully explained here.

Dysfunctional trust is in the qualitative study explained quite similarly by the informants.

Table 15: Focus group results regarding Downsides to trust

UK	Norway
"If there is too much trust, people are not doing what they are supposed to. Then they are taking a chance, a risk. It is abdication of responsibility." *"A downside to trust it to expect, make assumptions that it will work."* *"If you have too much trust you can lean back to much and accidents will happen."* *"Too much trust can lead to disaster."*	*"The downside to trust is if you admire someone, can lean back to much, you are not alert."* *"If you trust experienced people too much, you don't question, you think he knows what he is doing, you don't pay attention."* *"Too much trust can lead to disaster, in worst cases death."*

Table 16:   Key informants understanding of Downsides to trust:

> *"It is possible to trust someone too much. Nick Pidgeon argues that too much trust can be bad."*
> *"If you assume that something is done right, and the person has the competence, it can be too trusting – and the individuals can sit back too much...and rely on others. They will not be alert."*
> *"Reduced personal trust can be to think that somebody else is doing it."*
> *"Shared assumptions that other will do it, is not good. It can be dangerous. More near misses and accidents may occur."*

All informants agreed that trust had downsides as well as upsides (Jeffcott et al., 2006). Both UK and Norwegian employees argued that too much trust is not good and may lead to an accident or disaster. One of the Norwegian informants claimed that *"If you trust experienced people too much, you don't question, you think he knows what he is doing, and you don't pay attention"*. UK employees stated: *"If you have too much trust you can lean back to much and accidents will happen"* and *"Too much trust can lead to disaster"*.   Too much trust may result in employees making assumptions about somebody's competence, expertise or procedures that may not be correct. If you make assumptions and trust someone too much when it comes to procedures, knowledge or experiences, it may have fatal consequences (Cox et al., 2006; Jeffcott et al., 2006). One of the informants had first hand experience with this, and reported:

> *"I trusted someone too much once, and it caused an accident because I didn't check. I was taking over for someone, and all I had to do was press that button. I didn't check. I trusted him. It caused basically a spill. I always did check myself, but for some reason I just trusted him, on that occasion"*

In this example an incident occurred regardless of the employees trust in his workmate. This example shows that too much trust may be dangerous. Conchie and Donald (2007) agree that too much trust in someone can be a downside to trust. Rule based trust might be another aspect of too much trust. Rule based trust is understood as shared understanding of the systems of rules regarding appropriate behaviour (Jeffcott et al., 2006). In the example above common rules may normally have been followed, and there have been shared understandings of the rules. The informant may have assumed that his colleague had checked. This may have lead to reduced awareness and less vigilant behaviour from the informant, and resulted in an accident.

The study found that trust and distrust are explained as separate concepts Lewicki et al., 2006). *"If there is too much trust, people are not doing what they are supposed to, then they are taking a chance, a risk. That is something else. It is abdication of responsibility, you may call it distrust".* According to the theoretical framework separation of trust and distrust as two different constructs may be interpreted as multi conceptual constructs within the two-dimensional approach. In contrast to a uni-dimensional which uphold trust and distrust as bipolar constructs (Lewicki, et al., 2006).

Too much trust may according to the key informant, be explained as dysfunctional trust. This point to the fact that trust may not always be good for safety, as some of the safety literature states, and pave the way for a more complex understanding of trust (Burns et al., 2006; Conchie & Donald, 2006b; 2007; Lewicki et al., 2006).

Functional trust is according to both the UK and Norwegian informants important for safety (Reason, 1997). Construct like*; "respect, responsibility, information, commitment, protection, positive personal development and open communication"* are used in their definitions of trust. One of the UK employees claimed that: *"Trust help to protect people, and give them a voice."* Trust leads to open communication and may also be directly protective against accidents. The concept of trust seems however to highlight elements differently in the UK and Norway. Conchie and Donald (2007) take a social exchange theory perspective in their understanding of trust. They seem to focus mainly on behavioural, reciprocal and also cognitive aspects of trust. This appears to correspond with UK employees' perception of trust within a cognitive approach, where trust depends on trustworthy characteristics like *"respect, integrity, knowledge"*. Norwegian employees discussed cognitive trust, but they had an additional, more affective and relational approach that they called *"social trust"*. Functional trust is however in both countries viewed as necessary in creating a strong safety culture in order to reduce accidents (Conchie & Donald, 2006b; 2007; Mearns et al., 2001; Reason, 1997). The results of this study support previous research that found trust to be an important factor for creating a strong safety culture (Burns et al., 2006; Conchie et al., 2006; Conchie & Donald, 2006b; 2007; Reason, 1997).

Functional distrust includes, according to Conchie and Donald (2007) monitoring and checking. In the qualitative study significant results were found regarding the value and

understanding of functional distrust in both countries. They agreed that checking and questioning is a good thing, and that it may be called functional distrust.

Table 17:   Focus group results of Functional distrust

UK	Norway
"Yes, you must always check, and ask even the best guys: did you check it?" *"It is necessary to have an element of question inside your head, like 'what if'? You must question yourself as well as others."* *"I always feel responsible to go over things no matter who I am dealing with."* *"It is your duty to check. It should be expected of the guys, and taken as a kind of support."* *"It is human to make mistakes, it is impossible to be alert at all times.*	*"You must think for yourself."* *"You should always have a proactive attitude."* *"It is important to ask critical questions."* *"There must be some distrust, we must check, and double-check."* *"A general scepticism is necessary."* *"You must be vigilant."* *"You can call it functional distrust, it is necessary."* *"It will get unpleasant if people are too critical."*

Table 18:   Key informant understanding of Functional distrust and the Trust model

"Mistrust is a good thing. Everybody make mistakes, that is human, that is why it is important to check. Checking can be a form of mistrust." *"To challenge people may be another form of distrust. There must be some skepticism."* *"The model is ok. Functional distrust is necessary, and need to be managed in a particular way. Good communication is important."* *"I am insecure about the last window (dysfunctional distrust), there must be scepticism, and not too much trust, but maybe it should be two separate scales, one for trust and one for distrust."*

All informants put high emphasis on the importance of questioning, checking and have a general scepticism regarding each others safety performance. Proactive and vigilant behaviour is necessary to prevent accidents and to promote safe work practices. Functional distrust is good and should be expected of everybody. A quotation from the interviews stated; *"there must be some distrust, we must check and double check. It is your duty to check, and it should be expected of the guys, and taken as a kind of support"*. Another employee claimed: *"It is necessary to have an element of question inside your head, like 'what if?' You must question yourself as well as others"*. This form of distrust seems to be what Conchie and Donald (2007) name functional distrust.

Other concepts that may reflect the same kind of distrust are: creative mistrust or critical mistrust. These constructs reflect a positive wariness, alertness and vigilance about the standard of safety systems (Cox et al., 2006; Hale, 2000; Poortinga & Pidgeon, 2006). The key informant stated: *"Mistrust is a good thing. Everybody make mistakes, that is human, that is why it is important to check. Checking can be a form of mistrust"*.

Also Hale (2000) argues that a watchful eye is necessary even if there is an emotional and caring trust for each other. Creative mistrust must be present because inevitable slips and errors may occur. Both the UK and Norwegian informants discussed the possibility of making mistakes, and that errors may happen to even the best guys. One of the informants expressed:

"The managers tell us: accidents are avoidable theoretically, but it is not possible to be mentally alert at all times, not even Tiger Woods are. You can not expect somebody to be alert for 12 hours, and to get everything right day after day. Everybody make mistakes, that is human, that is why it is important to check."

The key informant states that: *"Functional distrust is necessary, and need to be managed in a particular way. Good communication is important"*. Open communication is an essential strategy in developing trust. Trust is important to develop a good safety culture, and reduce near misses and incidents which is the target for safety relations (Conchie & Burns, 2008; Mearns et al, 2001; Mearns & Yule, 2008; Reason 1997).

On the concept of distrust, the UK and Norwegian informants seem to agree on both perceptions and importance. Distrust, as well as trust includes cognitive, affective and behavioural factors (Lewicki et al., 2006). Cognitive factors are associated with negative expectations about a person's trustworthiness. The affective factors of distrust are reflected in the survey as scepticism and alertness. In regards to distrust it is quite evident how the informants perceive the concept. An explanation of why UK and Norwegian informants appear to agree may be because of the distinct content of the construct. Distrust is by the informants explained as: questioning, monitoring, checking, alertness, scepticism and vigilant. Lewicki et al., (2006) state that these factors may range from low to high level.

The qualitative analysis found no disagreements regarding the understanding of the value and priority-setting of functional distrust for safety performance. This may indicate that functional distrust is an important and basic value within Seawells

organizational- and safety culture across shelves. Functional distrust seems to be explained similar in both groups.

An additional reflection may be the results of the HSE-questionnaire on the Safety Behaviour dimension. This measure is not directly related to functional distrust, but may in the authors' opinion be related to aspects of functional distrust in relation to safety performance. Both groups reported high ability to stop dangerous work, and also claim that safety is the number one priority. When it comes to safety performance the result showed that a higher percentage in Norway had been involved in incidents, near misses and injuries without seeking medical attention compared to their UK co-workers (Tharaldsen et al., 2008a). Some of these results may be explained by different cultural reporting cultures and will not be further discussed here.

Values included in functional distrust seem to be shared across shelves, and may constitute a part of Seawells international safety culture. It seems like Seawell in UK in recent years has developed a strong safety culture based on: mutual trust, open communication and shared perceptions (Conchie et al., 2006?, Jeffcott et al., 2006; Hale, 2000; Reason, 1997).

In regards to dysfunctional distrust one of the informants argued that: *"It will get unpleasant if people are too critical"*. He stated that too much controlling and checking behaviour can create insecurity and a poor environment. If functional distrust is checking, scepticism and questioning, the other end of the distrust scale; dysfunctional distrust, must be too much of these elements. Conchie and Donald (2007) claim that if the environment or the safety culture contains too much checking, questioning and control the results may be sabotage or revenge. Too much distrust may reduce an open communication. A lack of communication may lead to limitation in the opportunity of developing shared safety perceptions and shared safety behaviour. Low level of trust will accord to Dirk and Ferrin (2002 in Conchie & Donald, 2007) most likely lead to a negative attitude and poor safety culture. The individual may find a dependency on others psychologically distressing. This may lead to risk taking behaviour, near misses or accidents (Clarke & Payne, 2006; Conchie and Donald, 2007; Reason, 1997), which may in the end effect all employees. Dysfunctional distrust may therefore be detrimental for safety behaviour and again safety culture. A combination of both safety

specific interrelated trust and distrust seem according to Conchies and Donald (2007) Trust Model to be the best solution in developing a strong safety culture

4.5   Reflections about trust, safety and a combination of leadership styles

It seem that Seawell leaders in UK are changing their values in the direction of what the GLOBE study found that leaders in the Anglo cluster preferably should include. These values are among others; team orientation and a participative leadership style (House et al., 2002; 2004). The informants in the qualitative study in UK report that the gap between leaders and employees is closing. In regards to leadership matters they discussed leaders' orders and `do-lists` they used to receive. Their conclusion was that teamwork has increased and there are less `do-lists`. In Norway the informants reports that the leaders are `one of the guys`. Teamwork and empowerment are practiced.

GLOBE cultural leadership dimensions are not used in the HSE-project or in this present study, but the GLOBE leadership and cultural findings supply the understanding and interpretation of trust relations and leadership. Some identical leadership characteristics were found in the Nordic Europe and the Anglo cluster. The leaders should be charismatic, and have a participative- and team oriented style. In the Anglo cluster they should be caring and considerate of others, and give employees delegated responsibility. A dislike of rules and authority existed in the Anglo leadership values (Dorfman et al., 2004; House et al., 2002, 2004). Good leadership is in the Nordic Europe cluster according to House et al., (2004) reported as participative, value based and responsibility delegating leadership. In Norway the Power distance is lower and leaders are `one of the guys`. The work environment features empowerment and teamwork. This is more congruent with the characteristics that describe a `leader` compared to the characteristics with `managers` (Alvesson, 2002).

As discussed earlier elements of trust are perceived differently in UK and Norway. With the result of the HSE-project and the GLOBE cultural dimensions in mind, it appears like UK has more of a transactional leadership style, and Norway more transformational. GLOBE study show cultural differences between the Anglo and the Nordic Europe cluster. Anglo cluster has higher scores on; individualism, power distance, assertiveness, hierarchy, competitiveness and authority leadership (House et al., 2004).

Trust explained within transformational leadership style has most emphasis on affective (ABT) or relational trust (RT). The results of the survey found that this kind of trust has most in common with Norwegian employees' definition of trust. In contrast transactional leaders tend to acquire what might be called `conditional` trust. Trust is related to a reliable behaviour regarding contracts and exchanges (Bass & Riggio, 2006; Jung and Avolio, 2000). Conchie and Donald (2007) have a social exchange perspective, and seem to share this approach to trust. The UK employees' perception of trust also gives the impression of a more rational, cognitive and Calculus Based Trust (CBT).

Different values and practices are reflected within the different leadership styles. Transformational style emphasises empowerment, teamwork and involvement in decision making. According to Cox et al., (2006) there is a direct relationship between safety, transformational leadership and trust. Yukl (1998, in Jung and Avoilo, 2000) argue that followers' commitment to the leaders' vision depends on a leader's capability to build trust with followers. Transformational leaders engage in emotional relationships with their followers, and are known to have good communicational skills, which are found to be fundamental for trust relations (Conchie & Donald, 2007, Jung & Avoilo, 2000). This leadership style is known to create trust better than a transactional leadership style (Conchie & Donald, 2007; Clark & Ward, 2006; Cox et al., 2006).

Transactional leadership style is more of a `top down` style, where work task are allocated from the top. Transactional leaders have clear structures, so the workers (or subordinates) know what is expected of them (Bass & Riggio, 2006; Jacobsen, 2004). In contrast to most safety literature, Clark and Ward (2006) studies support transactional leadership style in developing a good safety climate. They found that rational persuasion had a positive influence on injury rates and was an important element for improving safety. The impression is that organizations in Norway are dominated by values from a transformational leadership style. One of the Norwegian informants questioned whether it has gone too far the other way in Norway. Norwegian employees claim that in regards to safety issues and procedures it is necessary to follow rules, regulations and orders. One of the informants said:

> *"There are different ways of talking to people, sometimes I use "we should do this....", but when I say "you have to.... They look at you strange. Here the leader is: one of the boys. It can be to much the other way too..., sometimes they must just take an order. It is good an bad to be one of the boys"*

This may support the Norwegian informants' statement about *"hierarchy efficiency"* which he claims exist in the UK. They also discussed that it is necessary to follow orders in regards to safety regulations. Transactional leadership style had a positive effect on safety participation as well as the transformational leadership style (Clark & Ward, 2006).

Within the leadership or management approach there are several variations and combinations. Jacobsen (2004) divide leadership schools in two main characters; leader-strategy E (hard) and leaders-strategy O (soft). These styles are by Burns (1928) conceptualized as either transformational or transactional leadership (Bass & Riggio, 2006; Jacobsen, 2004). An important question is which leadership style is most suited to increase trust, and again prevent near misses and accidents in the UK and in Norway?

As GLOBE study theory highlights, leadership is cultural and contextual conditional (House et al., 2004). The HSE-result shows that UK has a higher safety score than the Norwegians. They have a higher Power distance and seem to have more of a transformational leadership style. The qualitative study found that UK safety culture has changed in the last few years, and is now a strong safety culture with high levels of safety behaviour. Even though UK leaders today give the impression of sharing more values related to a transformational leadership style, they still appear to be mainly transactional. Power distance between leaders and workers may have something to do with the results of the HSE-survey that showed that UK scored better on most safety dimensions. However, further studies are needed to support this view.

Maybe Norwegians would gain from having leaders that in some situations use elements from the transactional style? UK leaders with a transactional style are clear and more assertive, and the workers know what is expected of them. The typical leadership in Norway is of a more empowerment character, and may create insecurity with workers. A combination of transformational and transactional leadership depending on contextual and cultural implications may therefore be considered in creating the best safety environment (Bass & Riggio, 2006; Clark & Ward, 2006).

5   Summary and conclusion

The starting point of this research was an interest in cultural similarities and differences related to trust and leadership and its anticipated influence on organisational safety performance. Through participation in the HSE-project; A comparative study of HSE-culture on the Norwegian Continental Shelf and UK Continental Shelf, these issues have been examined through a combined methodological approach. Phase one in the HSE-project, was completed through a quantitative HSE-questionnaire. This study is a part of Phase two, where the research questions were based on the results from phase one. The aim has been to achieve a deeper and more complex interpretation and understanding of some of the results from the HSE-questionnaire study. The research questions have been answered and discussed due to data collection from a combination of quantitative and qualitative methods. Qualitative data were gathered in focus group interviews and a key informant interview in UK and in Norway. Safety, Cultural (GLOBE) and Trust measures, and some additional questions were used in the data collection. The qualitative data were reduced and analysed within the meaning coalescing method (Kvale, 1997). The results from the HSE-questionnaire, the qualitative results, and the theoretical framework, have been discussed in order to answer the research question in a valid and reliable way. The study may be relevant for management within different industries, first and foremost within High Risk Organisations but may also be relevant more generally - as trust is supposed to have an influence also on other aspects of organisational performance (Seppanen et al., 2006?). The study may also contribute to a further understanding of cultural influence on trust and distrust with regards to safety performance and leadership styles.

1) How may cultural aspects influence on the perception of trust, leadership and safety?

Discussion based on the result and theoretical framework showed that GLOBE cultural aspects; Power distance and Assertiveness and other cultural values did appear to influence the perception of trust differently in UK and Norway. It appears to be a higher Power distance and Assertiveness in the UK, according to House et al., (2004) based on a history of class system, stronger hierarchical levels and classes within the society.

Culture did seem to have an influence on the understanding of the trust concept. Perception of the concept seemed to fluctuate among the UK and the Norwegian informants. Both the UK Seawell employees and the key expert informant seem to emphasis cognitive elements of trust, and CBT (respect, knowledge and integrity) more than Norwegian Seawell employees. In Norway they included cognitive aspects, but appeared more to highlight Affective elements of trust, and RT (care, concern and relational bonding) more than cognitive elements. The survey found as Sako and Helper (1996), trust to be a complex concept, perceived different within different culture. The trust the UK employees have in their leaders seem to be different from the trust Norwegians have in their leaders.

Cultural differences in leadership style may have some effect on trust and safety. Power distance between leaders and co-workers indicate that there may be a difference in the relationships between leaders and co-workers in the UK and Norway. In the UK higher Power distance and Assertiveness may lead to a more respectful and distanced kind of trust between supervisors and workers than in Norway. The UK employees' perceptions of their leaders appear to be related to values like; respect, authority and knowledge, and the relationship may be more hierarchical. In Norway the relationships seem to rest on empowerment and teamwork in the sense that leaders seem to be more equal to their co-workers and that the Norwegian employees seem to find it more "natural" to question their bosses when in disagreement. Norway has a history and long tradition of being more collectively oriented and judging values connected to equality high. The Norwegian work life in general is also recognized by a strong tradition of Industrial Relation resulting in a highly valuated cooperation between employers, employees and their unions. The Norwegian and the UK informants discuss, however, if it is beneficial for safety always to "do as you are told". House et al., (2004) theory on cultural clusters and differences between them with regards to values and practices seem to have some importance in this study. In addition, the results supported the influence of leaders' commitment to safety (Mearns & Yule, 2008). It seems like a combination of both the cultural dimensions and trust in management commitment to safety are related to organisational safety performance.

UK Seawell employees have a more positive score in relation to most safety dimensions. It is however within this study not possible to draw a conclusion that the UK employees have a stronger or better safety culture or organisational performance compared to the Norwegian employees. It is difficult to draw direct implications on the

influence of cultural or organizational values on the differing safety performance in the two countries, however, their values and practices seem to differ and this difference may be related to their aspects like; cultural values, reporting culture, organizational, and contextual platform differences.

2) How is trust related to safety?

Trust was found to be an important factor for safety in the HSE-study, in both countries. In contrast to the emphasis of different elements within the perceptions of the concept trust in general, the understanding of trust in relation to safety seem to be characterized by agreement. Trust is in this study regarded as a complex, multidimensional construct. With regards to safety trust is in general believed to have a positive influence on organisational safety culture by its ability to facilitate a more open communication and learning about safety. However, as this study also has shown; both too much trust or two little trust may be incremental for safety. An agreement on both upsides and downsides to trust was found in the qualitative survey. Conchie and Donalds Trust model (2007) seem to be valuable in explaining that both functional trust and distrust is necessary in developing a strong safety culture. The Conchie & Donald study was accomplished on UK offshore workers and this study confirm most of their results. In addition, this study reflects on the differences and similarities between offshore workers in two countries and interestingly; the qualitative data shows that they seem to agree upon the up- and downsides of trust.

3) Are leadership styles different across Shelves, and how may this influence trust and safety?

Leadership styles seem to be different in the UK and in Norway. Results from the HSE-project, in connection with the theoretical framework indicate that UK leaders have more of a transactional leadership style, than the Norwegian leaders. The Norwegian leaders seem to have more characteristics from a transformational leadership style. Transformational leadership style is in most of the safety literature recognized to have the best effect in increasing trust. Recent studies (Clark & Ward, 2006) found however that transactional leadership does have a positive effect on safety behaviour and safety culture, so the relationship may not be that obvious. Preventing incidents and accidents in High Risk Organizations may benefit from leaders who have both a transformational

and transactional approach. So, high organizational safety performance may come from a combination of both leadership styles and contextual and cultural differences may influence on this relation. A transactional leader style may be functional in the UK, but may not be functional in the same (beneficial) way in Norway. In this picture it is also important to acknowledge UK informants assertion of the leader styles as under change, "closing the gap" etc. The fact that the industry itself – in both countries - has undergone (cultural) changes which also implies changes in what is regarded as "best practice" or the best ways of accomplishing employee commitment to safety.

5.1   Further research

A cross-cultural perception of values, trust, and leadership appear to be meaningful in international business, but also in interpretation and use of measures. This study has lead to several other interesting perspectives that need further research. Some of these issues are: Why do the UK employees have a higher safety score, than the Norwegian Continental Shelf? Is it because of cultural and organizational differences, leaders' commitment, both, or other factors?

The trust UK employees have in their leaders seemed to be different from the trust Norwegian have in their leaders, because of cultural differences. How do relational bond influence trust, and safety? How do cognitive elements of trust influence safety? Which elements of trust are most affective for safety relations, in regards to both workmates and supervisors?

Leadership styles in UK and in Norway do appear to differ. Which leadership style is most suited in relation to create trust and a strong safety culture in UK, and which one in Norway? Which role does the leaders' commitment have in safety performance? In regards to House et al (2004) a cross cultural approach must be taken.

The discussion about how globalization and culture will influence organizational values and performance is relevant in according to the result of this study. Will organizations be more and more alike, or will cultural values also in the future be a framework for our understanding of concepts, values and practices? It is not easy to answer these questions, but until now, this study reinforces the research who argues that cultural values will affect the content, structure and organizational value, practice and leadership (House et al., 2004).

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Appendix

TIME SCHEDULE –

WORK SHOP IN ABERDEEN 28TH OF MARCH 2008

COMPARING SAFETY CLIMATE ACROSS NATIONAL CULTURES

1000 – 1030   Introduction, by Kenny Dey.

1030 – 1100   Presentation of main results, Jorunn Tharaldsen

1100 – 1130   Does the results make any sense to you? Kathryn Mearns & Jorunn.

1130 – 1145   Break – Tea/Coffee

1145 – 1200   Introduction to group work – Kathryn & Jorunn

        5 group and 5 topics:

        1. The GLOBE dimensions
        2. The safety behaviour dimensions
        3. Reporting and intervention dimensions
        4. Trust dimensions
        5. Physical and psychosocial dimensions and work environment

1200 – 1300   Group work 1. Work with dimensions and questions.

1300 – 1345   Lunch

1345 – 1445   Plenary session 1 – Presentation of group results.

1445 – 1515   Group work 2.

1515- 15.45   Plenary session 2 – Decide important improvement areas(Kathryn) – Write down the 3 most important themes from your group work on the flip overs. Everybody marks what they find most important with a red dot and "least" important with a blue dot.

        Count up the dots, write down the three themes with the highest scores.

        Discuss how to work with these themes and implement actions? Roles & Responsibilities.

1545 – 1600   Summary. Did we reach our goals for the day? What did we learn?

AGENDA

WORK SHOP NORGE 24. APRIL 2008

SAMMENLIKNENDE STUDIE AV HMS-KULTUR
PÅ TVERS AV SOKLER

1000 – 1030	Introduksjon, Alf Ragnar Løvdal
1030 – 1100	Presentasjon av hovedresultater, Jorunn Tharaldsen
1100 – 1130	Spørsmål? Kjenner dere resultatene igjen?
1130 – 1145	**Pause – Kaffe/te**
1145 – 1200	Introduksjon til gruppearbeid
1200 – 1300	Gruppearbeid I
1300 – 1345	**Lunsj**
1345 – 1430	Plenum I – Presentasjoner av resultater fra gruppearbeidene
1430 - 1500	Gruppearbeid II -
1500 – 1530	Plenum II – Presentasjon av resultater fra gruppearbeidene
1530 – 1545	Prioritering av hovedtema og problemstillinger for det videre arbeidet
1545 – 1600	Oppsummering og avslutning

Trust questions – Focus group interview

Aberdeen, 28.03.2008

1. In general; what do you think is linked to cultural (national) differences and what may be linked to company values (Seawell, former Seadrill)?

   - Why are there national differences?

2. UK employees report higher trust in their first line supervisor than their workmates. For the Norwegian shelf we find the opposite. How would you explain this? -Why?
   - How does this affect safety?

   - Does the leaders' commitment to safety have an effect on safety behaviour? Why?

3. What do you think is the upside and downside to trust?

   - Is it possible to trust someone too much and,
   - What may be the consequences?
   - Do you think distrust sometimes could be functional?
   - If possible; give some examples from your daily work.

4. Do you think there are national differences regarding trust and distrust ? Why?

   - How do you define trust? Give some examples.

   - How do you define distrust? Give some examples.

   - What may be the outcome of distrust?

5. All in all; which issues do you see most important to improve?

6. The survey shows that the Norwegians ask the leader more questions in disagreements, than their British colleagues, why?

   - Does the British employee do as they are told; they don't question their supervisor in disagreement as much as the Norwegians, why?

   - The British leaders are more assertive than the Norwegians, why?

   - Integrity is an important leadership quality, are there any national differences?

7. The survey shows that the British employees have less risky behavior and fewer accidents than the Norwegians, why?

8. Which effect does the leaders' commitment have for safety issues?

Interview guide - Key informant interview

Aberdeen, 28.03.2008

The questions are based on the results from the HSE-questionnaire:

1. We see there are cultural (national) differences?
   - Why are there national differences?
   - How do you define trust?

2. UK employees report higher trust in their first line supervisor than their workmates. For the Norwegian shelf we find the opposite. How would you explain this? -Why?

3. What do you think is the upside and downside to trust?
   - Is it possible to trust someone too much?
   - What may be the consequences?
   - Do you think distrust sometimes could be functional?
   - What can be the outcome of trust?

4. Stacey Conchie and Ian Donald (2007) have developed this model for trust and distrust regarding safety behaviour. What do you think about this model?

5. Do you think there are national differences regarding trust and distrust? Why?

6. The survey shows that Norwegians question their supervisor more than the British workers when there is disagreement?

   - Respect is an important factor for leaders in the two countries?

   - Any differences?

   - Integrity is an important leadership quality, are there any national differences?

7. The survey shows that the British employees have less risky behavior and fewer accidents than the Norwegians, why?

8. Why do you think the British employees feel more confident in confronting their colleagues, than the Norwegians?

9. Which effect does the leaders' commitment have for safety issues?

Meldeskjema

for forsknings- og studentprosjekt som medfører meldeplikt eller konsesjonspliktjf. personopplysningsloven og helseregisterloven med forskrifter)

5.1.1 Kopi av innsendt meldeskjema

Prosjektnummer: 19286

1. PROSJEKTTITTEL
A comparative Study of HSE Culture on UK and Norwegian Continental Shelves

2. BEHANDLINGSANSVARLIG INSTITUSJON	
Institusjon: International Research Institute of Stavanger AS (IRIS)	
Avdeling/fakultet	Institutt:

3. DAGLIG ANSVARLIG			
Navn(fornavn og etternavn) Jorunn-Elise Tharaldsen			
Arbeidssted(avdeling/seksjon/institutt): International Research Institute of Stavanger AS IRIS		Akademisk grad: Høyere grad	Stilling:
Adresse – arbeidssted: Postboks 8046		Postnummer: 4068	Poststed: STAVANGER

Telefon: 51875158	Mobil: 95723494	Telefaks: 51875200	E-post: jet@iris.no

4. VED STUDENTPROSJEKT (studiested må alltid være samme som arbeidssted til daglig ansvarlig)

Navn(fornavn og etternavn) på student:		Akademisk grad:	
Tove Erna Belland		Høyere grad	
Adresse – privat:		Postnummer:	Poststed:
Sylvelinstien 53		4021	STAVANGER
Telefon:	Mobil:	Telefaks:	E-post:
90755438	90755438	51875200	teb1@iris.no

5. FORMÅL MED PROSJEKTET

Problemstillinger, forskningsspørsmål, eller lignende.	The goals of the project are:
	To examine whether or not perceptions of
	1. Safety climate differs on the two shelves
	2. Organizational culture differs
	3. Self-reported risk-taking behaviour differs
	4. Trust in workmate/management commitment to safety differs
	5. Safety performance differs between shelves

6. PROSJEKTOMFANG

☐ Enkelt institusjon   ☐ Nasjonal multisenterstudie   ☒ Internasjonal mulitisenterstudie

Angi øvrige institusjoner som skal delta:

Universitetet i Stavanger, ved professor Knud Knudsen

University of Aberdeen, ved dr. Kathryn Mearns

7. UTVALGSBESKRIVELSE

Beskrivelse av utvalget. _Gi en kort beskrivelse av hvilke personer eller grupper av personer som inngår i prosjektet (f.eks. skolebarn, pasienter, soldater)._	Employees working within drilling, wireline/wellservices in Seawell working on both shelves.

Rekruttering og trekking. *Oppgi hvordan utvalget rekrutteres og hvem som foretar rekrutteringen/ trekkingen.*	Survey accomplished summer/autmun 2007: All employees in Seawell in the UK and Norway - the whole population. Employees working on production platforms. I UK ble spørreskjemaene sendt i lukkede konvolutter fra IRIS med svarkonvolutt adressert til oss. Dette ble gjort blant annet fordi det var en del "stanser" i prosjektene og en del av de ansatte befant seg hjemme. I Norge valgte vi en litt annen prosedyre. Spørreskjemaene ble delt ut på heliporten onshore, men også her med egen svarkonvolutt adressert til IRIS. Det ble informert muntlig om at deltakelse var frivillig. Spørreskjemaet ble også innledet med generell informasjon om prosjektet og med lovnader om konfidensiell behandling av data. Accomplished spring 2008: Two focus groups (UK and Norway. Participants: Onshore and offshore employees, management/supervisors, drillers, wireline, deck, maintenance and technical personnel. The project leader put up a "wishing list" based on positions. Participants were selected by the company. 15 participants joined in the focus groups/work shops. The parts concerning Trust in the work shops were taped. Summaries of the work shops have been written and the taped data has been transcribed by the masterstudent.
Førstegangskontakt. *Oppgi hvem som oppretter førstegangskontakt med utvalget.*	I (project leader) have joined in at meetings in the company on several occasions giving information on the project, its milestones and project plan. We have established a project group in the company. We had our first meeting 26th of January 2007 and have meetings regularly.

Oppgi alder på utvalget	☐ Barn (0-15 år)	☐ Ungdom (16-17år)	☒ Voksne (over 18 år)

Antall personer som inngår i utvalget.	We accomplished a repsone rate at 67%, with 165 respondents in the UK and 605 respondents on the NCS.
Dersom det inkluderes personer med redusert eller manglende samtykkekompetanse, beskriv denne del av utvalget nærmere.	

8. INFORMASJON OG SAMTYKKE

Oppgi hvordan informasjon til respondenten gis.	☒ Det gis skriftlig informasjon. ☒ Det gis muntlig informasjon. Redegjør for hvilken informasjon som gis Det ble gitt muntlig informasjon i fokusgruppene om prosjektet, dets mål, lovnad om konfidensialitet og at de måtte gi oss et frivillig samtykke til innhenting og bruk av data på denne måten.

	☐ Det gis ikke informasjon. Forklar hvorfor det ikke gies informasjon.
Samtykke *Innhentes samtykke fra den registrerte?NB. Se veiledning for krav til samtykke.*	☒ Ja Oppgi hvordan samtykke innhentes. Skriv om konfidensialitet/taushet ble utarbeidet i forbindelse med survey'en og de delene av work shop'en som skulle tapes. I forbindelse med kartleggingen ble det utarbeidet en liten info del om prosjektet i begynnelsen av spørreskjemaet. På workshop'en/fokusgruppene ble det levert ut skjema med taushetserklæringer og det ble muntlig orientert om våre ønsker (om å tape) og at de stod fritt til å velge det vekk.
	☐ Nei Gi en redegjørelse for hvorfor det anses nødvendig å gjennomføre prosjektet uten samtykke fra respondenten.

9. METODE FOR INNSAMLING AV PERSONOPPLYSNINGER

Kryss av for hvilke datainnsamlingsmetoder og datakilder som skal benyttes	☒ Spørreskjema ☐ Personlig intervju ☐ Observasjon ☒ Gruppeintervju ☐ Psykologiske/pedagogiske tester ☐ Medisinske undersøkelser/tester ☐ Journaldata ☐ Registerdata ☐ Biologisk materiale ☐ Utprøving av legemidler ☐ Annen innsamlingsmetode, oppgi hvilken: Kommentar til metode for innsamling av personopplysninger:

10. DATAMATERIALETS INNHOLD

Gjør kort rede for hvilke opplysninger som skal samles inn. Legg ved spørreskjema, intervjuguide, registreringsskjema e. a., som foreligger ferdig utarbeidet eller som utkast.	Spørreskjemaet: Bakgrunnsvariable: Plattformnavn, lederansvar, arbeidsområde, stilling, rotasjons- og skiftordninger, nasjonalitet, alder og andel stilling: Holdningsdimensjoner rettet mot grunnverdiene i organisasjonen (GLOBE), sikkerhetsklima, involvering i hendelser/ulykker, rapporterings-og intervensjonskultur, fysisk og psykososialt arbeidsmiljø

Registreres det direkte personidentifiserende opplysninger?	☒ Ja ☐ Nei	Hvis ja, oppgi hvilke: ☐ Navn, adresse, fødselsdato ☐ 11-sifret fødselsnummer
Registreres det indirekte identifiserende personopplysninger	☒ Ja ☐ Nei	Hvis ja, oppgi hvilke: Er litt i tvil her. På plattformene vil det i de kvantitative dataene være det kanskje være mulig å identifisere enkelte av lederne, f.eks. boresjefer som det ikke er mange av på hver installasjon og om man kobler dette mot alderskategorier. Imidlertid har vi dekket tre skiftperioder i Norge og to skiftperioder i Norge, så det vil uansett være vanskelig.Alder er også registrert i kategorier, så de er jo også rundere enn om man hadde spesifikk alder.
Behandles det sensitivepersonopplysninger?	☐ Ja ☒ Nei	Hvis ja, oppgi hvilke: ☐ Rasemessig eller etnisk bakgrunn, eller politisk, filosofisk eller religiøs oppfatning. ☐ At en person har vært mistenkt, siktet, tiltalt eller dømt for en straffbar handling. ☐ Helseforhold. ☐ Seksuelle forhold. ☐ Medlemskap i fagforeninger.
Behandles det opplysninger om tredjeperson?	☐ Ja ☒ Nei	Hvis ja, hvordan blir tredjeperson informert om behandlingen? ☐ Får skriftlig informasjon. ☐ Får muntlig informasjon. ☐ Blir ikke informert.

11. INFORMASJONSSIKKERHET

Redegjør for hvordan datamaterialet registreres og oppbevares.	☐ Direkte personidentifiserende opplysninger (spesifiser hvilke på punkt 10) erstattes med et referansenummer som viser til en manuell/elektronisk navneliste som oppbevares atskilt fra det øvrige datamaterialet. Oppgi hvordan koblingsnøkkelen lagres og hvem som har tilgang til denne.
	☐ Direkte personopplysninger lagres sammen med det øvrige materialet. Oppgi hvorfor det er nødvendig med oppbevaring av direkte identifikasjonsopplysninger sammen med det øvrige datamaterialet:
	☐ Annet Spesifiser:
Hvordan skal datamaterialet registreres og oppbevares? *Sett flere kryss dersom opplysninger registreres flere steder.*	☐ Fysisk isolert pc tilhørende virksomheten ☒ Lydopptak ☒ Manuelt/papir ☒ Pc i nettverksystem tilhørende virksomheten ☐ Annet: ☐ Pc i nettverksystem tilknyttet Internett tilhørende virksomheten Hvis annen lagring, beskriv nærmere: ☐ Isolert privat pc ☐ Privat pc tilknyttet Internett Behandles lyd/videoopptak på pc? ☐ Videoopptak/fotografi ☒ Ja ☐ Nei
Sikring av konfidensialitet.	Beskriv hvordan datamaterialet er beskyttet mot at uvedkommende får innsyn i opplysningene? Datafiler og lydfiler lagres i egen prosjektmappe hvor bare prosjektdeltakerne har tilgang. PC tilgang er beskyttet med brukernavn og passord. Vi har strenge sikkerhetsrutiner ved IRIS. Vi er blant annet pålagt å låse våre kontordører og alle må ha adgangskort for å komme inn i bygget. Prosjektleder og masterstudent har tilgang til prosjektmappen som ligger på IRIS sitt nettverkssystem. Masterstudent har underskrevet taushetserklæring.
Vil prosjektet ha prosjektmedarbeidere som skal ha tilgang til datamaterialet på lik linje med daglig ansvarlig/ student? ☒ Ja ☐ Nei	Oppgi hvilke: Professor Knud Knudsen har fått en kopi av spørreskjemadataene. Knudsen har et engasjement ved IRIS og er via dette bundet til en

		generell taushetserklæring.
Innhentes eller overføres personopplysninger ved hjep av e-post/internett/eksternt datanett?	☐ Ja ☒ Nei	Hvis ja, beskriv hvilke opplysninger og hvilken form de har
Vil personopplysninger bli utlevert til andre enn prosjektgruppen?	☐ Ja ☒ Nei	Hvis ja, til hvem:
Skal opplysninger samles inn/bearbeides ved hjelp av databehandler?	☒ Ja ☐ Nei	Hvis ja, redegjør for hvem som skal samle inn data og hvilke data dette gjelder: Spørreskjemadataene er punchet inn av en av våre timeengasjerte. Dataene registreres og lagres som sagt på IRIS sitt nettverkssystem og i prosjektmappen med begrenset persontilgang. Timeengasjerte har underskrevet en generell taushetserklæring.
Hvis multisenterstudie:		Redegjør for hvordan samarbeidet mellom institusjonene foregår. Hvem har tilgang til materialet og hvordan reguleres tilgangen: Jf. beskrivelsen ovenfor angående Prof. Knud Knudsen. Kathryn Mearns ved University of Aberdeen er med mer som kvalitetssikrer og medskribent, presenterer prosjektet ved diverse konferanser, bidrar til å korrekturlese engelske manus osv.

12. VURDERING/GODKJENNING AV ANDRE INSTANSER

Er prosjektet fremleggelses-pliktig for Regional komité for medisinsk og helsefaglig forskningsetikk (REK)?	☐ Ja ☒ Nei	Hvis ja, legg ved eller ettersend kopi av tilråding/tillatelse.
Dersom det anvendes biologisk materiale, er det søkt REK om opprettelse av forskningsbiobank?	☐ Ja ☒ Nei	Hvis ja, legg ved eller ettersend kopi av tilråding/tillatelse.
Er det nødvendig å søke om dispensasjon fra taushetsplikt for å få tilgang til data?	☐ Ja ☒ Nei	Hvis ja, legg ved eller ettersend kopi av tilråding/tillatelse.
Er det nødvendig med melding til Statens legemiddelverk?	☐ Ja ☒ Nei	Hvis ja, legg ved eller ettersend kopi av tilråding/tillatelse.

Andre	Angi hvem.
	☐ Ja
	☒ Nei

13. PROSJEKTPERIODE

| *Oppgi tidspunkt for når datainnsamlingen starter – prosjektstart samt tidspunkt når behandlingen av person-opplysninger opphører – prosjektslutt.* | Prosjektstart (ddmmåååå): 01.01.2007

 Prosjektslutt (ddmmåååå): 31.12.2008 |
| *Gjør rede for hva som skal skje med datamaterialet ved prosjektslutt.* | ☒ Datamaterialet skal anonymiseres.

 Gi en redegjørelse for hvordan datamaterialet anonymiseres.

 Lydfiler kommer til å bli slettet etter at de er transkribert. I transkripsjonene vil det ikke være mulig å identifisere enkeltpersoner. De kvantitative dataene vil også bli gjennomgått for å unngå identifikasjon av enkeltpersoner.

 ☐ Datamaterialet skal oppbevares med personidentifikasjon

 Hvor skal datamaterialet oppbevares?

 Gi en redegjørelse for hvorfor datamaterialet skal oppbevares med personidentifikasjon: |

14. FINANSIERING

Norges Forskningsråd. Seawell. Selskapet ble i fjor skilt ut som eget selskap, dvs. i prosjektperioden. I infoskriv/taushetserklinger og spørreskjemaene står derfor Seadrill navnet.

15. TILLEGGSOPPLYSNINGER

16. ANTALL VEDLEGG

| Oppgi hvor mange vedlegg som legges ved meldeskjemaet. | 8 |

Taushetserklæring

Målet for denne studien er å undersøke Seawell ansattes synspunkter på forhold knyttet til HMS-kulturen i Seawell. Dette er en erklæring fra forskerteamet i prosjektet om at innsamlet informasjon vil bli behandlet konfidensielt. Prosjektet er finansiert av Seawell og Norges forskningsråd. Alle data og lydfiler vil bli ødelagt etter at prosjektet er ferdigstilt.

Tusen takk for samarbeidet!

Stavanger 24.04.08

Jorunn Elise Tharaldsen
Prosjektleder (IRIS)

Tove Erna Belland
Masterstudent (UiS)

ASSURANCE OF CONFIDENTIALITY

The purpose of this study is to find out your views on safety, health, and environment in Seawell. The information given to us will be handled with outmost confidentiality. The project is funded by Seawell and the Norwegian Research Council. All file interview data will be destroyed after the project.

Thank you for your cooperation!

Regards

Jorunn-Elise Tharaldsen

Project Leader (IRIS)

Tove Erna Belland

Master student (UoS)