



The Communicative **Blue**

Lisa Loloma Froholdt

Research assistant, Ph.D. Fellow

**Department of Maritime Research
and Innovation**

University of Southern Denmark

llf@sam.sdu.dk





Funding and data resources

- **Danish Lauritzen Foundation and**
- **The University of Southern Denmark.**

- **Two shipping companies and The Danish Navy have contributed with data.**





Maritime Communication

- distinctly unique, certainly complex
and not so culturally oriented





Agenda

- **Relevance of a study in maritime communication – what's in it for the industry – or Steen Sabinsky maybe?**
- **Existing research**
- **Theory and method**
- **Analysis and findings**
- **Conclusion**





Observations – industry focus

- **Assumptions about communication**
- **Maritime Communication very uncharted – need for knowledge**
- **Safety manuals, company procedures and operations are bound up on communication**
- **Cross-cultural communication – big ticket issue - need for knowledge**





Introduction and relevance

- Two thirds of the world merchant marine vessels have multi-national and multilingual crews (Horck, 2005). *Communication and language difficulties challenge occupational safety on board.*
- In Vessel Traffic Service controlled areas, communication accounts for up to 40% of collisions (IMO SMOP). *Efficient communication imperative to avoid loss of lives, property and damage to the environment.*
- Koester & Pyne, 2005; Kavechi, Lane & Sampson, 2002, advocate for more human factor research and linguistic analysis of cross-cultural communication.



Maritime research

- **Moreby 1990**
- **Knudsen 2000, 2003; 2005/2006**
- **Lane, Kavechi and Sampson 2002**
- **Pyne and Koester 2005**
- **Theotokas and Progoulaki 2007**

- **Hutchins 1995**
- **Sexton & Helmreich, 2003, Wulle & Zerr, 1997**





Research in maritime communication

SeaSpeak (1988)

The Marcom Project (1999)

Pritchard and Kalogjera (2000)





Stages of communication

	SeaSpeak 1988	The Marcom Project 1999	Pritchard and Kalogjera 2000
1	Make initial call	Making contact	Announcement
2	Respond to call	Exchanging messages	Actual message
3	Indicate working channel	End of message	Ending of message
4	Agree working channel		
5	Switch over		
6	Send message		
7	Respond to message		
8	End transmission		
9	End procedure		



Objective

- **Generate new knowledge about technologically mediated interaction in routine and emergency communication in the maritime industry.**
 - **Develop an applicable methodology for analyzing the communication involved in operations in a cross-cultural context.**
- Voice Data Recordings.**





Method and Theory

■ Linguistic analysis -Discursive psychology (DP) and Conversation analysis (CA) and Ethnomethodology (EM)

- ✿ How do participants make fact and descriptions of events and actions accountable in talk?
- ✿ How are psychological phenomena displayed in talk?
- ✿ Turn taking, turn design, sequence organization, social actions and sense-making processes.

■ Ethnographic observations – description of settings, identities, trade terms, membership knowledge

■ Wittgenstein - informal rules that in fact influence human activity

■ Consequences:

- ✿ Naturally occurring radio communication data – authentic, unstructured by researcher, ~ human factors
- ✿ Inductive ~ Wittgenstein, interpretative approach
- ✿ Focus on context ~ Wittgenstein, Dekker, human factors
- ✿ researcher involvement ~ interpretative approach



Human Factors

■ **Factors is the science of understanding and supporting how people interact with technology, and draws upon and creates knowledge in three academic disciplines.**

- ❁ The mental component of interactions
- ❁ The central role of design
- ❁ The representation of information flow between people and technology draws upon and contributes to computer, communication and information science.

■ **The reason for investigating human factors is to optimize performance and increase safety in maritime operations.**





Communication as a social practice

- **The social dimension - Hutchins**
- **The context - Dekker**
- **The dynamics of the transmission of information**





Data corpus

128 naturally occurring conversations, ethnographic observations and participant observations.

- **5 recordings of communication in 2 different emergency situations and**
- **123 recordings of communication in routine situations**
- **a Trans-Atlantic sea passage on a tank ship and**
- **field studies at a shipping company and a Vessel Traffic Service centre.**



Sequence design in communication

1	Prebeginning	Technological distribution of knowledge between parties, SHIPPOS, AIS
2	Summons/answer	Distribution rule: caller speaks first 'Calling out'ness feature of summons Calltaker provides caller identification first





Sequence design in communication

3	Identification/recognition	Formal characteristics despite knowledge of recipient or reason for call Must take place in a first turn at talk Must be understood and verbally acknowledged by recipient Self identification must be visually embodied and identified on a radar screen and this visual embodiment is then verbalized
4	Information inquiry	Question/answer sequences Elongated turns at talk Interlocking sequence organization Truncated action sequences Verbal acknowledgement of co-localized or trans-located institutional practices The distribution of rights sets rules for governing interaction



Distribution of rights – vts operator

Excerpt 1:log 66

**3:*VTS: err Sea Empress err VTS here (.) err just
for your information**

**.h if you continue that course there is shallow water
ahead of you (.)**

errr in about two and a half mile .h





The distribution of rights - ship

Excerpt 2:Log 70.

1:*Serp: #err Sea Empress (.) call sign is (Sea Serpent) #

2:*Emp: #yes (1.0) go ahead () please #

3:*Serp: #er what do you (.) intend to ↑do be ↓cause we are
↑closer: a:nd ↑closer:

and you should (.) slow ↓down to .h err not to take
me on the () (.) is ↑condition ↓warning now
(.) on my ↑arpar #





Social Organisation - not culture

Excerpt 4: Ship and Shore 05

64:*Shore: Have you tried to err go harder port all the time

65:*Cap: .hhh SIR I EXPLAIN YOU AGAIN (.) (LEAVE ALSO) (.) NOT ANSWER THE HRELM (.)

Exerpt 5: Ship and shore 05

74:*Shore: (hallo hallo) you just just err let's let us caume calm down captain

.hh let's just take it easy for two minutes and we find a discussion and then we we agree what to do



Truncated actions

Excerpt 18 :log 63

***VTS: thank you sea goddess (.) I see you on my radar (.) .h I already (.) received a (.) copy of your ↑SHIPPOS (1.0) for your information current's heading towards south (.) approximately ↑one knot in the traffic seperation (.) stand by channel eleven (.) sixteen and have a pleasant trip**





Maritime Communication

- **Task focused**
- **Formal characteristics – recipient knowledge is irrelevant.**
- **Sense-making must be verbalized**
- **Identification permeates maritime communication**
- **Complex in design**
- **Speakers orient to the social organization of the team**





Conclusively

- **Maritime is distinctly unique**
- **Maritime communication is certainly complex in design**
- **Speakers do not orient always towards culture as a hinderance in maritime communication**





Implications what IS in for me?

The chosen methods could be used as a methodology for analyzing VDR data in the maritime industry.

Both method and theory used here provide an innovative approach to understanding the context of communication, in that they do not ask respondents how they think they communicate, but instead they contribute to map out how speakers in practical realisation make sense of communication in a given situation.

Further research in VTS communication, Pilot communication, Rescue Communication – quality shipping



Thankyou for your attention!

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