The Swedish seal-hunters’ conceptual system for seal – a cognitive, cultural and ecological approach

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Abstract

The aim of this paper is to present a completed study of the Swedish-speaking seal-hunters’ conceptual system for seal in the North Scandinavian area. A cognitive perspective is applied in the analysis, in which focus is on the hunters’ knowledge of the seal. The theoretical starting-point is taken in cognitive linguistics and cognitive anthropology. The investigated vocabulary contains 150 different words for seal, mostly found in oral recorded material.

The study emphasises the fact that lexical meaning comprises linguistic as well as cultural knowledge. The reconstruction of the conceptual system is therefore based on both a semantic analysis of the vocabulary for seal, and on an analysis of the cultural and ecological context of seal-hunting during the 20th century.

Only a few categories for seal are the same in the whole area of investigation and can be said to constitute a cognitive and communicative basic level. The structure of the hunters’ conceptual system in the area is otherwise characterised by breadth and variation. Variation occurs on three different levels: 1. Regional variation, partly explained by differing hunting methods in different areas. 2. Seasonal variation related to different needs of cultural knowledge. The summer and autumn hunt did not require a large amount of knowledge, and consequently there was no need to categorise the seal. The late winter hunt on ice required an immense amount of knowledge with regard to the ecology of the seal and the ice-environment, for that reason an extended conceptual system for seal was used. 3. Variation with regard to different actions during the late winter hunt.

Keywords: North Germanic, Swedish dialects, conceptual system, cultural model, knowledge system, categorization of seals.

1. Introduction

This article presents a completed study of the Swedish-speaking seal hunters’ conceptual system for seal in the North Scandinavian area (Ed-
lund 2000). A cognitive perspective is applied in the analysis, where focus is on the hunters’ knowledge of the seal, with the purpose of investigating the structure of the hunters’ conceptual system. The theoretical starting-point is in cognitive linguistics and cognitive anthropology (Lakoff 1987; Johnson 1987; Langacker 1987; Strauss & Quinn 1997; Palmer 1996; Geertz 1993).

The conceptual system was used in the early 20th century in the coastal area around the northern part of the Gulf of Bothnia – the sea between Sweden and Finland. Swedish is the native language of both Swedish and Finnish hunters, but they speak different dialects. The seal species that were hunted in the Bothnian waters were mainly grey seal (Halichoerus grypus) and ringed seal (Phoca hispida), but harbour seal (Phoca vitulina) has periodically been found here too. Seal hunting has been pursued for several thousand years in the Bothnian area. In the 1900s, the seal was hunted most intensively during the interwar period and the Second World War. The seal was a multi-purpose resource where all parts were used: the meat, the hide and the blubber. In the 1970s sealhunting ceased completely when hunting for seal was prohibited since the seal population had greatly diminished due to overhunting and environmental toxins.

2. Experientialism and cultural model

In cognitive linguistics, I have primarily used ideas developed by George Lakoff and Mark Johnson, namely the theory of experientialism (Johnson 1987; Lakoff 1987; Lakoff & Johnson 1999).1 Focus is here on the internal world of concepts, based in individual experiences. According to this theoretical approach, the hunters’ conceptual system for seal is (deeply) rooted in the hunters’ world view 2, and in their experience and knowledge of the seal.

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1. The theory of experientialism assumes that external reality imposes certain restraints on human concept formation. But the reality that we construct, perceive, understand and discuss resides inside us, in our internal world of concepts with its basis in our own individual experiences. The way we categorise and understand objects, events and actions is always based on experiences we have as human beings, in a given time, in a certain place, i.e. in a certain culture and in a certain environment.

2. Cf Palmer (1996) where a cultural theory of linguistic meaning is discussed. According to Palmer, world views provide stable points of reference for interpretation and understanding of linguistic expressions.
My study emphasises the fact that lexical meaning comprises linguistic as well as cultural knowledge (Langacker 1987:154; 1997:240f.). It is therefore not possible to maintain a distinction between linguistic knowledge and cultural knowledge, or alternatively, encyclopaedic knowledge.

Both conceptual and cultural knowledge has an important characteristic with methodological consequences for the study of conceptual systems – the knowledge is namely largely unconscious and therefore also invisible and implicit. Lakoff and Johnson call these unconscious mind structures the cognitive unconscious (1999:10ff.). Since conceptual systems are mainly made up of implicit knowledge and tacit assumptions we are not aware of their structure and content (Quinn & Holland 1987:14). This implies that cultural knowledge is largely unaccessible to conscious introspection.

This approach to lexical meaning and cultural knowledge has led to the following methodological considerations in my study. The analysis of the hunters’ conceptual system for seal cannot be limited to a study of the vocabulary for seal, since the vocabulary only gives limited access to the implicit cultural knowledge. Therefore, the analysis has been extended to comprise also the cultural and ecological context of seal hunting in the 1900s. Here I have chosen the anthropological concept of cultural model as a point of departure (Quinn & Holland 1987).3 The cultural model can be compared to the cognitive model of linguistics. They are both models for the organisation of knowledge, but where the cognitive model mainly emphasises the individual organisation and categorisation of knowledge, the cultural model emphasises the common knowledge shared by many in a certain society.

My analysis is obviously complicated by the fact that I am studying a hunting culture which is dissolving, since seal hunting as a trade no longer exists. In order to make my interpretation credible I have aimed for a thick description, a concept introduced by the anthropologist Clifford Geertz (Geertz 1993:10).

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3. Presentation of data

The analysis is mainly based on oral recorded material, from various archives, as well as from my own recorded interviews with hunters. The collected vocabulary consists of 150 different words for seal. Some 100 of these words are found in the oral material, while an additional 50 words, used for comparative purposes, are found in printed sources. Slightly less than a third of these 150 words are, however, hapax legomena, (words of which only one instance is recorded) which in part can be explained by the fact that the vocabulary is to a considerable extent regional. It is important to bear in mind that this collected material is only a fragment of the conceptual system for seal that was used in the investigated area during the last century. Since hunting has decreased more and more after the 1950s, the conceptual system has gradually dissolved.

4. The cultural model of the seal hunters

The hunters’ cultural model for seal hunting is here regarded as a common construction of reality which is made up of the hunters’ shared knowledge based on their individual and collective experiences. According to the anthropologists Naomi Quinn & Dorothy Holland cultural models can be understood as presupposed models of the world that are shared by the members of a society and which play an important role both in their understanding of the world and their behaviour (1987:4).

In discussing the functions of cultural models as guidance for human behaviour, it is important to stress that the relation between the cultural models and the individuals’ goals and actions should not be considered an automatical or mechanical process. The cultural model holds within it a potential for different actions to undertake.\(^4\)

We do not assume that cultural models always translate simply and directly into behavior. ... Nor do we expect cultural conceptualizations of the world to be the sole determinants of behavior. The work in this volume does suggest, however, that cultural models – which we infer from what people say – do relate to their behavior in complex, powerful ways (Quinn & Holland 1987:6).

\(^4\) Cf Strauss (1992) where the relation between the cultural model and the individual motivation is further discussed, here regarded as a motivational force.
The cultural model consists of separate knowledge systems. Within the hunters cultural model at least two knowledge systems can be perceived, relating to two different ecological environments. In the winter the seal was hunted out on the ice and in the summer and autumn it was hunted in the open water. Because of the different ecological conditions, different types of knowledge were required.

The hunters’ conceptual system for seal organises ecological as well as cultural knowledge and constitutes one part of each seasonal knowledge system. My investigation also shows that there is a large variation in the conceptual system due to differing ecological conditions. The variation is related to the structure as well as to the vocabulary and the categories. The two species categories ‘grey seal’ (gräsäl) and ‘ringed seal’ (vikare) are however exceptions. They are found on the basic level and can be said to unite the conceptual system. Apart from these, there is only one other term that was used in different hunting seasons, namely stegsäl. The meaning of the word varies between the two hunting seasons and can therefore be said to belong to different categories. During the winter hunt the word refers to smaller seals in broken drift ice which are relatively easy to hunt. Some hunters, on the other hand, use stegsäl for grey seal that wanders to the north in May towards the last ice, or grey seal that wanders south in the early summer when the ice has disappeared. During the autumn hunt stegsäl refers to smaller ringed seals which wander north along the coast.

The vocabulary and the conceptual categories differs whether the seal is hunted on ice or in open water. Since different categories are used in different environments one and the same seal will be categorised differently depending on the time of the year and the environment. One particular seal hunter says in an interview that a smaller ringed seal was called muding by the hunters when the seal was in the ice environment. According to the informant the same seal was called knubbsäl when it was lying on a rock in the early summer.

During the summer and autumn hunt, the conceptual system being used is very limited, since hunting for seal in the open water was relatively uncomplicated and did not require a large amount of knowledge. There was consequently no need to categorise the seal. The terms for seal that were used during this season are very general and comprise all seals that are hunted or caught, for example ‘autumn seal’ (höstsäl), ‘summer seal’ (sommarsäl), stegsäl and ‘harbour seal’ (knubbsäl). The Swedish seal terms have been translated into English, if possible.
The Swedish terms are here given between brackets. Although some of the words are impossible to give a justifying English equivalent, which is the case for *stegsäl*.

5. The knowledge system during the ice hunt

My investigation focuses on the conceptual system for seal during the hunt on ice in the winter. This system is much more developed and more complex. Here we find a rich vocabulary and several categories for seal. The hunt on ice requires an immense amount of knowledge, both with regard to the seal and to the environment where the hunt takes place. Consequently, the hunters had to possess an intimate ecological knowledge. In particular the hunt for ringed seal required a lot of ecological knowledge, which is why there is a larger vocabulary and more categories for ringed seal compared to grey seal.

A large part of the investigation has been devoted to the reconstruction of the hunters’ knowledge system. My theoretical point of departure is that the hunters knowledge system should be regarded as a simplification and a generalisation of a much more complex reality.

In their understanding of observations and situations they make use of prototypical actions scenarios in a simplified world of cultural models in order to cognitively handle all the knowledge required in this environment (Quinn & Holland 1987:10ff.). Variations and factors which might make the interpretation more difficult are suppressed and the interpretations are usually unambiguous. This simplification makes it cognitively possible for the hunters to interpret a complex reality, where the hunters’ cultural knowledge serves as points of orientation in the external reality.

The hunt on the ice was pursued by shorter hunting trips from the main land as well as longer hunting expeditions – here referred to as *the long journey* (Sw. dial. lăngfālan). The ecological conditions were mainly the same for the two hunting types, but the hunt was organised differently. Shorter hunting trips were often undertaken by individual hunters, whereas the long journey required considerable organisation. It was an immensely demanding hunting expedition where the hunters set out on the sea ice in the beginning of March and returned in May or June. During these 2–3 months the hunters lived in the ice environment and their boat served as both means of transport and home. The hunting team usually consisted of 4–6 men.
Particular emphasis is here given to the hunters’ ecological knowledge, of the ice environment and the behavior of the seal. The ice environment was dangerous and had to be constantly observed since the sea ice in the Gulf of Bothnia is constantly moving. It is true that the sea is mainly ice-covered in the beginning of the hunting season in March, but only the ice near the main-land is fast and coherent. Knowledge of the quality of the ice was crucial for locating and identifying the seal in the ice environment, as well as for determining the ice strength. The hunters also needed detailed knowledge of the ice in order to find ways into the sea ice and subsequently locate a safe and secure place for the boat on the ice. Furthermore, knowledge of the weather and the wind was indispensable, since the hunters had to be able to predict changes in the ice environment based on changes in the wind and the weather.

Knowledge of the behaviour of the seals in different ice environments was of course also fundamental. The behaviour of the ringed seal and the grey seal has been investigated from the seal hunters’ perspective. It emerges that the two species present different behaviour with regard to movement patterns, breeding behaviour, ice environment and watchfulness. In addition to that, the behaviour varies between adult and young ringed seal.\(^5\)

5. The hunters who went out on the long journey entered into a purely male environment. The importance of solidarity and unity within the team was impressed upon the young boys when they were socialised into becoming hunters. In this changeable environment the group depended on all members of the team to take responsibility for the safety of the boat and their fellow hunters. An important part of getting acclimatised to being a hunter was of course to acquire the hunters’ conceptual system for seal, ice etc.
In my analysis of the hunters’ conceptual system for seal during winter I have used three action scenarios in order to illustrate the connection between the hunters’ behaviour (inside a cultural model) and their categorisation of the seal. The categories for seal, organising ecologic knowledge, are indispensable for the hunters’ understanding but can also be said to direct the hunters’ actions in these three recurring scenarios. This might be considered as an attempt to link cognition to action. The scenarios are the three following:

- The location of suitable hunting ices
- The individual hunters’ behaviour during the hunt
- The use of the seal as a resource

5.1.1. The location of suitable hunting ices

In order to locate suitable hunting ices, knowledge of the seals’ movement patterns and ice environment was required. A large part of this knowledge is found in the basic level categories ‘GREY SEAL’ (GRÁSÄL) and ‘RINGED SEAL’ (VIKARE). Furthermore the categories ‘TROOP’ (TRÜPP), ‘LATE TROOP’ (SENTRÜPP) and ‘OLD TROOP’ (GAMMELTRÜPP), contain knowledge of variation in the breeding behaviour of the grey seal. The older grey seals give birth earlier in the spring and nearer the edge of the ice, while the younger ones give birth later and they usually move further into the sea ice. In the search for ringed seal in March the hunters searched for a specific ice-environment – older rafted ice where the seal stayed in hollows in the ice for its lair (Sw. dial. vista) during the first period with the pup. This ringed seal staying hidden in its lair was called VISTSÄL and was thus not visible to the naked eye. In the search for grey seal later on in May, the category ‘CROWD’ (LÄGER) contains knowledge of the hunting area and the flock behaviour of the grey seal.6

5.1.2. The individual hunters’ behaviour during the hunt

The categories which organise the knowledge that directs the individual hunters behaviour during the hunt, are above all concentrated on the ice environment and the watchfulness of the seal. In this case too, the cate-

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6. This is when the grey seal makes for the last ice that can be found in the Gulf of Bothnia.
gories ‘GREY SEAL’ and ‘RINGED SEAL’ contain fundamental knowledge. ‘GREY SEAL’ is much easier to hunt than ‘RINGED SEAL’ in that it is not so shy. The choice of ice and the watchfulness of different ringed seals vary too, which is evident in a number of categories. ‘LONG RINGED SEAL’ (LÄNGVIKARE) and ‘ICE-FIELD LYING SEAL’ (SLÄTTLIGGARE) are watchful adult ringed seals which are very difficult to come within gunshot range of since they are found in open ice fields. The hunter must therefore take every precaution possible in order to get close to them. The young ringed seal presents a different behaviour. STEGSÄL and its member categories such as BUDDARE, MUDING, NADD and STEGBOLL, are usually found on broken drift ice where it is relatively easy for the hunter to find shelter when he approaches the seal. The young ringed seal is, moreover, not as shy as the adult ringed seal.

5.1.3. The use of the seal as a resource

The categories which organise knowledge about the use of the seal as a resource contain information about the seal’s amount of blubber and whether it is of use for the hunters’ fare when he is out on the ice. The sex of the seal constitutes significant knowledge in this scenario. A distinction is made whether the seal male is a ‘MALE’ or a ‘SMELLY MALE’. ‘SMELLY MALE’ (LUKTALG) is a male ringed seal that stinks and whose blood and meat is unusable. It is therefore of no value whatsoever apart from the bounty. The female seal adheres to different categories whether she has a pup or not. ‘MOTHER’ has given birth but is found without pup, ‘PUPMOTHER’ is found with the pup, and finally ‘BARREN FEMALE’ (GALL-MORSA) is a fat female seal with a lot of blubber. Her blood and meat can be used to make the hunters’ provisions last longer. The white fur of the grey seal pup was also of great economic value to the hunter, which is to be seen in the category ‘WHITE PUP’ (VITKUT). It should, however, be pointed out that the bounty was the main source of income in the 20th century, with the exception of the war, when blubber and meat also fetched a high price.

5.1.4. Categories for seal organising social knowledge

In addition to the ecological knowledge some of the categories can be said to be pertinent to the socialisation of men into becoming established hunters. In the hunt for ‘RED-BREASTED SEAL’ (RÖDBRÖSTAREN), the inex-
perceived hunter could practise creeping up to the seal, since this seal was not very watchful. The real test of knowledge and skill for the hunter was to be able to shoot the shy and reserved ‘LONG RINGED SEAL’ (LÅNGVIKAREN) or ‘ICE-PLAIN LYING SEAL’ (SLÄTTLIGGAREN).

5.1.5. Different scenarios – different categorisation

Since different knowledge of the seal was brought to the fore in the different scenarios, one and the same seal could be perceived as belonging to different categories. The adult ringed seal is categorised differently in all three scenarios. In locating the seal in the ice, the hunters locate the VISTSÅL, in hunting ‘LONG RINGED SEAL’ and in using the seal as a resource they make distinctions with regard to the seals sex and amount of blubber. It is either a ‘MALE’, a ‘SMELLY MALE’, ‘MOTHER’, ‘PUPMOTHER’ or ‘BARREN FEMALE’.

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<th>Adult ringed seal – in three different action scenarios</th>
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The smaller ringed seal could also be categorised in two different categories according to the ice-environment where it is to be found. When it is hunted on ice it is regarded as a STEGSÅL, or with the regional categories STEGBOLL, NADD or MUDING. When it is hunted in the open water in the ice-environment it is regarded as an ‘ICE HOLE SEAL’ (VAKSÅL).

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<th>Hunting smaller/young ringed seal in different ice-environments</th>
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<td>Hunting on ice</td>
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<td>Hunting in ice-holes</td>
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5.2. Basic level in the hunters’ conceptual system during the winter hunt

Is it possible to reconstruct basic level categories in the hunters conceptual system for seal during the winter hunt on ice? It is to be expected that the categories which constitute a knowledge basis for the hunters should be generally known and consequently more frequent. In my attempt to locate a basic level I have therefore used the categories’ scope of knowledge and their frequency in the material. Moreover I have also partly investigated whether these categories can be used to include other categories on a subordinate level.

There are however methodological difficulties connected with the investigation of the including function of the categories since the hunters possess knowledge of two parallel systems for the categorisation of the seal – the established scientific system and the hunters’ system. In discussions regarding the including function, the hunters are aware of the fact that the scientific system only recognises three species of seal – grey seal, ringed seal and harbour seal. For that reason it is probably safe to assume that the hunters overuse the scientific names for the different species. It is also apparent that the hunters often give preferential right of interpretation to the scientific system when the two systems disagree. The following two quotations from recordings serve as illustrations:

A. In the descriptions there is no seal called the naddseal.
   /What did the naddseal look like?/
   He was smaller and chubbier and…but if it is a different species, they probably come from the ringed seal.
   (Det finns då inte uti beskrivningarna nån själ som dom kalla för naddsjälen.
   /Hur såg han ut naddsjälen?/
   Han var ju mer liten och knubbig å…men om det är en annan art, nog torde de härrör från vikaren.)

7. The basic level constitutes an important knowledge basis. According to the principle of cognitive economy not all levels are equally informationally useful in a category system. As stated in Eleanor Roschs classic work on categorization: “the task of category systems is to provide maximum information with the least cognitive effort” (1978:28; cf D’Andrade 1995:115ff). The major part of human knowledge is to be found on one specific level – the basic level. The basic level thus constitutes a cornerstone of a taxonomy where generalizations are made on a superordinate level, with reductions of attributes, and specializations are made on a subordinate level with complementary attributes (cf Lakoff 1987:31ff; Ungerer & Schmid 1996:60ff.).
B. Properly speaking he is called harbour seal as it says on the plate, but we call this harbour seal naddšäl.
(Egentligen heter han knubbsäl han som står på planscherna, men den knubbsälen kalla vi för naddšäl).

The following four categories can without doubt be placed on the basic level: ‘GREY SEAL’, ‘RINGED SEAL’, STEGSÄL and ‘REDBREASTED SEAL’ (RÖDBRÖSTARE). They all have a rich scope of knowledge and they are frequent in the material. It is mainly ‘GREY SEAL’ and ‘RINGED SEAL’ which are used to include other seals. STEGSÄL is sometimes perceived as a species name by the hunters since it is believed to be a variety of the ringed seal. STEGSÄL also has several category members. In each dialect area there are at least two category members. Since two of the hunters’ basic level categories ‘GREY SEAL’ and ‘RINGED SEAL’ coincide with the scientific systematisation of seals, it is interesting to compare the structure of the two conceptual systems. In the scientific system which is based on the seal’s morphology, the species categories ‘GREY SEAL’ and ‘RINGED SEAL’ contain all the age groups from pup via young seal and over to the sexually mature seal. That seals are included in the same species without regard to age may seem to be a trivial statement, but it is important to emphasise this aspect in order to illustrate the differences between the two conceptual systems. The hunters’ art categories ‘GREY SEAL’ and ‘RINGED SEAL’ do not always include the young seals. There is a tendency to consider the young seals of grey seal and ringed seal as a variety, where STEGSÄL is said to be a different species of ringed seal and ROK a variety of grey seal.

In addition to the cognitive function of the basic level categories I want to argue that they also have a communicative function during the winter hunt on ice. During the long journey there were plenty of opportunities for contact between hunters from different dialect areas, where the major part of the vocabulary was local. Basic level terms are exceptions however, since ‘grey seal’ (gråsäl), ‘ringed seal’ (vikare), stegsäl and ‘rebreasted seal’ (rödbröstare) are shared by almost all hunters in the investigated area. In that respect, these terms function as a uniting link in the conceptual system of the hunters in this region and can therefore be said to have a communicative function.

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8. It is much more difficult to determine from the material whether STEGSÄL is inclusive in a hierarchical organisation of knowledge and thus always includes the category members. There is only one instance in the material where the stegsäl is used inclusively.
6. Conclusions

In conclusion, it can be stated that there is a large variation in the conceptual system for seal relating to the different ecological environment where the hunt takes place. I have been focusing the interaction between the conceptual system and different cultural needs. For hunting in the open water in summer a limited system is used since the hunt does not require that much knowledge. The conceptual system used during the hunt on the open ice in winter, on the other hand, is complex, since a detailed ecological knowledge was required of the hunter. The categorization of the seal depends on different prototypical action scenarios where various hunting actions are to be performed. The hunters’ knowledge of the seal emphasises the seals’ movement patterns, breeding behaviour, ice environment and watchfulness and to a certain extent the seal as a resource. The seals’ age and appearance are only to a very small extent significant knowledge. There are four basic level categories that constitute a fundamental basis of knowledge during the hunt on ice. The basic level categories are however not necessarily arranged in a hierarchical knowledge organisation where they include the category members. The scientific and the popular categorisation of species coincide, but they cannot be said to have the same cognitive status, since the popular categorisation is not distinctly including. It is also evident that situational factors play a vital part in the conceptual system where the ecological conditions of the hunt must be considered, i.e. the time of the year and the surrounding environment.

This study has required a combination of a linguistic and an anthropological perspective in order to combine a cognitive, cultural and ecological approach to the seal-hunters’ conceptual system. I believe, however, that it is productive to combine the linguistic analysis with a cultural perspective whenever the structure of a conceptual system is studied, since these systems always have social as well as cultural dimensions. (Investigations in other social and cultural contexts might perhaps indicate other situational factors which are important when particular conceptual systems are created, recreated and used.) Further research is here needed to clarify the ressembles and differences between the unconscious dimensions of conceptual knowledge and cultural knowledge. I believe that increased contact and cooperation between cognitive linguistics and anthropology would be beneficial to further investigations of the interplay between language, culture and cognition.
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Strauss, Claudia & Naomi Quinn

Ungerer, Friedrich & Hans-Jörg Schmid