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How to describe sports terms in information tools for laymen

1. Introduction

In the Danish Internet Dictionaries project (see Bergenholtz, 2015), we extract a number of Danish electronic dictionaries from one and the same database. My task as a dictionary editor in this project is to produce dictionary articles for lemmas in the existing lemma list. This involves using the web as a corpus from which examples, collocations, synonyms, word formations and other lexicographically relevant data is extracted and meaning explanations are produced (see Bergenholtz & Agerbo 2014a, 2014b). Though each editor in the project works on his or her own letter, each person has been employed in the project in order to produce articles for words within their field of expertise, either based on their educational background or their personal interests. I have made most of the football articles as well as other sports articles and articles related to physical movement. In this project, our target user speaks Danish as his mother tongue and is a layman. The dictionaries that we produce are either monofunctional or polyfunctional, and they are either based on communicative or cognitive functions. The meaning explanations of sports terms I have produced have been targeted to serve a reception function and aimed towards laymen. The focus of this contribution will be the production of these dictionary articles, but I will also comment on our work on a new and original information tool with terms used in biomechanics and sports science (see Bergenholtz & Agerbo, 2015) as well as my own future project on sports terms for laymen derived from the development of this new tool. By applying the functional theory of lexicography developed at the Centre for Lexicography at Aarhus University (see for example Tarp, 1995; Bergenholtz & Tarp, 2003), I will demonstrate the considerations behind the description of sports terms based on lexicographical needs, which are always connected to a certain type of user who finds himself in a certain type of situation.

2. Writing meaning explanations of sports terms for laymen in the Danish Internet Dictionaries project

In the dictionary project, our approach to incorporating data in information tools is based on three main principles:

- 1) The data has to be correct
- 2) The data has to be easily understandable
- 3) The data has to be relevant, i.e. useful for the given user type in the given situation

The dictionary project started in 2002, and over the years we have made noticeable changes in our approach to writing meaning explanations. We have gone from making general, encompassing and,

from a reception perspective, sometimes inadequate meaning explanations to more elaborate meaning explanations useable in a reception situation. For example, instead of the repetitive meaning explanation of the lemma *håndbold* (Eng. *handball*), in which case most dictionaries simply define it as a ball that is used for the game handball (1), we describe the form of the object as well as the use of the object (2):

Example 1: håndbold (Eng. *handball*)

- (1) bold, som bruges til spillet håndbold
(Eng. ball that is used in the game called handball)

- (2) læderbold, som anvendes i sportsgrenen håndbold, hvor det gælder om at skyde bolden i mål ved brug af hænderne, hvorfor bolden er designet til at kunne holdes i en hånd
(Eng. leather ball that is used in the game called handball in which the purpose is to shoot the ball and hit the goal by using one's hands, which is why the ball has been designed to be held in one hand)

In our opinion, solution (2) is much more useful to the layman dictionary user who finds himself in a reception situation where he needs an information tool to tell him the meaning of an unfamiliar word that he has come across while reading a text. Suggestion (1) fulfils criteria 1 and 2, but it does not satisfy criterion 3 – this meaning explanation is not useful for a reception situation. A native speaker who looks up this particular word in a reception situation will already know that it is a ball used for handball. Therefore, the lexicographer should consider what kind of information the user might be looking for when he looks the word up in a reception situation. Suggestion (2) could have included more exact information about the size of the ball, but the user has already been informed that the ball is of a size that a person can hold in one hand, thus the specific ball sizes used by different age groups will not be necessary to include in a meaning explanation for a reception purpose. Instead, this could be relevant in a dictionary with a cognitive function, which is used by a user who wants to know as much as possible about the relevant lemma, i.e. not for a specific communicative purpose. For this cognitive situation, other information about handballs such as the variation in hardness depending on its use, e.g. soft balls for children and hard-wearing balls for street handball, would be included in the dictionary article.

Most dictionaries are polyfunctional, which means that they contain only one meaning explanation, and this single meaning explanation is supposed to satisfy the user's needs in all situations. But if we extract a number of monofunctional dictionaries from the same database, the question arises as to whether different meaning explanations should be written for different situations. From our database, we extract the same meaning explanation for all our information tools, or more precisely, for the tools in which meaning explanations are shown, e.g. The Danish Meaning Dictionary and The Danish Synonym Dictionary. However, in the latter tool, it is only in case of polysemy that the meaning explanations are presented. This is here exemplified with the dictionary articles of the Danish word *dommer* (Eng. *judge* or *referee*):

The Danish Meaning Dictionary

dommer substantiv (Eng. **judge/referee** noun)

1. person, som er udnævnt eller konstitueret til at vurdere bestemte sager eller personer ved en domstol og derefter udøve den dømmende magt
(Eng. person who has been appointed to assess certain cases or persons in a court of law and who exercises legislative power)
2. person, som dømmer i en sportskamp, en konkurrence eller lignende, og hvis opgave således består i at sikre, at spillets regler følges
(Eng. person who leads a sports match, a contest or the like and whose task is to make sure that the rules of the game are being followed)

The Danish Synonym Dictionary

dommer substantiv (Eng. **judge/referee** noun)

1. **Betydning** (Eng. **Meaning**)
person, som er udnævnt eller konstitueret til at vurdere bestemte sager eller personer ved en domstol og derefter udøve den dømmende magt
(Eng. person who has been appointed to assess certain cases or persons in a court of law and who exercises legislative power)
Synonymer (Eng. **Synonyms**)
bedømmer (Eng. adjudicator)
civildommer (Eng. civil judge)
kriminaldommer (Eng. criminal judge)
opmand (Eng. umpire)
2. **Betydning** (Eng. **Meaning**)
person, som dømmer i en sportskamp, en konkurrence eller lignende, og hvis opgave således består i at sikre, at spillets regler følges
(Eng. person who leads a sports match, a contest or the like and whose task is to make sure that the rules of the game are followed)
Synonymer (Eng. **Synonyms**)
kampdommer (Eng. referee)
sportsdommer (Eng. referee)

In terms of economy in the working process (time and money), reusing the same meaning explanation for all situations is the best solution. In terms of usability, however, it may be better to produce different meaning explanations depending on the function of each tool extracted from the database. For example, if a person is writing a text and wants to use a certain word, but is not sure if the meaning of the word is the one he has in mind, he checks its meaning in an information tool for

text production (not reception). In this situation, he does not need a long and elaborate meaning explanation; a shorter one would suffice, e.g. a meaning explanation that only contains a synonym. If a person is writing a text and wants to use a synonym for a certain word, it is necessary to provide meaning explanations in case of polysemy as the user needs to know for which polysem the different synonyms can be used as in the example above with the Danish word *dommer* (Eng. *judge* or *referee*). In this case, the meaning explanation has to be more elaborate than in the previous situation, or at least it has to be more than a synonym. In a reception situation, a user would need a rather elaborate meaning explanation as was demonstrated in Example 1, suggestion 2, since the user looks up a word in order to understand its meaning in a specific text.

Some sports terms are only used within one branch of sport (see Example 1 above and Example 2 below), and these are simpler for a lexicographer to work with than words used within several branches of sport (see Examples 3 and 4 below). However, this does not mean that it is an easy task to make a meaning explanation of such words. This is illustrated in Example 2:

Example 2: målmændshandske (Eng. *goalkeeper glove*)

A simple meaning explanation could be:

- (1) handske, der anvendes af en fodboldmålmænd

(Eng. glove used by a football goalkeeper)

This meaning explanation simply reiterates the words with which the compound is formed in the same way as the example with the lemma *håndbold*, which makes it tautological. Yes, the information in this meaning explanation is true and easy to understand, cf. criteria 1 and 2 above, but its relevance and thereby usefulness in a reception situation is questionable. When a word represents a physical object, the lexicographer should as a minimum mention of what material the object is made (suggestion 2 below – notice the phrase *made of*) and to what purpose it has been made (suggestion 3 below – notice the phrases *made of*, *used by* and *designed to*):

- (2) handske i blød latex, der anvendes af en fodboldmålmænd

(Eng. glove that is made of soft latex and is used by a football goalkeeper)

- (3) handske, der er lavet af blød latex, og som anvendes af en fodboldmålmænd til træning og/eller kamp, da den er designet til at yde et godt greb under bestemte vejrforhold eller i al slags vejr samt beskytte fingre og håndled mod skader

(Eng. glove that is made of soft latex and which is used by a football goalkeeper for training and/or in matches as it has been designed to provide a good grasp under certain weather conditions or in all kinds of weather situations as well as to protect fingers and hands from being injured)

As can be seen from suggestions (2) and (3), in our approach to meaning explanations, we do not distinguish between what some would call semantic and encyclopedic data as we do not think there is a clear line between the two (Haiman, 1980; Bergenholtz & Kaufman, 1996). Instead, we analyse the data in a number of corpus examples in which the given word occurs and extract the data that best describes the word as well as covers what people want to know about the word. This information can for example be identified in answers to questions posed in blog discussions or in data provided in product advertisements (for more information on this approach, see Bergenholtz & Agerbo, 2014a). Thus, our meaning explanations are intended for actual use and not as linguistic entertainment or as examples in linguistic handbooks. A dictionary is a tool, and a tool is to be used by a certain user in a certain user situation (Bergenholtz & Bergenholtz, 2013). Therefore, the goal of writing a dictionary article is to give the reader what he needs and not to write the article according to some linguistic theory. This perspective entails that a meaning explanation should not be as broad as possible, e.g. ‘a handball is a ball used in the game handball’. It is also our opinion that it is better to make a meaning explanation understandable and useful and then risk that it is not applicable to 100% of all examples that a user may come across, i.e. there may be other situations in which a word is used, but these make up such a small percentage, that they can be discarded. For example, if a word is used about men in most or at least more than 90% of all corpus examples and only very few examples are about women, it could be mentioned in the meaning explanation that this word is (mainly) used about men.

Our database and some of our dictionaries contain a field called the lexical remark field, which is a remark field related to the meaning of the lemma. This is regarded as a field in which the lexicographer can provide the user with further descriptions of the word that do not necessarily need to be described in the meaning field, i.e. the meaning explanation. The lexical remark field in the database is only shown in the polyfunctional dictionary called The Danish Internet Dictionary (NET), which is used to solve cognitive and communicative problems, not the monofunctional Danish Meaning Dictionary, which only has a communicative function. This means that the lexicographer must consider whether a piece of data is necessary to provide in (a) a reception situation (the latter tool), i.e. the person primarily wants to get help in a specific situation, not to learn anything, though this may be a “bonus” if the person remembers the information for future situations in which this information can be used; or if this data is related to (b) a cognitive situation, that is, if the user looks up the word in order to learn as much as possible about e.g. a single phenomenon or a complex topic (the former tool). If we consider suggestion (3) above, it could be argued that mentioning “for training and/or in matches” is irrelevant data in a meaning explanation of the word *goalkeeper glove*, and that it could be excluded if the meaning explanation becomes too long to serve its function, despite of the following collocations that indicate that a distinction is sometimes made between goalkeeper gloves for training and for matches:

- bruge Predator Training målmændshandsker til sin træning (Eng. use Predator Training goalkeeper gloves for training)
- denne målmændshandske, der er velegnet til både træning og kamp (Eng. this goalkeeper glove, which can be used for both training and in matches)

- en utrolig slidstærk målmandshandske, som kan bruges til træning og kamp (Eng. a very hard-wearing goalkeeper glove, which can be used for both training and in matches)
- super gode fodbold handsker til kamp (Eng. really great goalkeeper gloves for matches)

In Examples 1 and 2 with the lemmas *handball* and *goalkeeper glove*, the words are only used within one branch of sport (Example 1: handball, and Example 2: football – though further analysis has shown that *goalkeeper glove* may also be used in (ice) hockey). The next chapter analyses two examples of sports words that are used within more than one branch of sport in terms of what data to include in the meaning explanations and how many meaning explanations should be written for such words.

3. Writing meaning explanations of sports terms: One meaning explanation or a meaning explanation for each branch of sport?

For the lemma *straffe* (Eng. *penalty*) in terms of its meaning in sports, the five listed dictionaries (three English dictionaries and two Danish dictionaries) provide one or two meaning explanations of the lemma. What four of them have in common is that an opponent has broken a rule (this part has been italicized in the meaning explanations below) and all five of them (vaguely) point out that a penalty occurs in (some) sports (this part has been underlined in the meaning explanations below):

Example 3: straffe (Eng. *penalty*)

Cambridge Advanced Learner's Dictionary & Thesaurus, British English (Cambridge)

an advantage given in some sports to a team or player when the opposing team or player *breaks a rule*

Macmillan English Dictionary for Advanced Learners (Macmillan)

In football, rugby and similar sports, a chance to score a goal or point without other players trying to take the ball off you. This is given to you because *an opponent has broken a rule*

Oxford British & World English Dictionary (Oxford)

(1) (In sports and games) a handicap imposed on a player or team *for infringement of rules*

(1.1) A kick or shot awarded to a team because of an infringement of the rules by an opponent

The Danish Dictionary (DDO)

ret til fra nært hold at skyde eller spille bolden direkte mod modstandernes mål uden at blive generet af andre forsvarsspillere end målmanden fx i fodbold, håndbold og ishockey

(Eng. the right to shoot the ball directly towards the opponents' goal from a short distance without being interrupted by other defenders than the goalkeeper, e.g. in football, handball and ice hockey)

The Danish Internet Dictionary (NET)

- (1) situation, hvor en spiller af dommeren får tilkendt chancen til fra nært hold at forsøge at få bolden i mål uden at blive hindret af modstanderholdets spillere, *hvilket er en straf for modspillerne for at have begået fejl*; fx i fodbold, håndbold, basketball eller ishockey

(Eng. situation in which the referee awards a player the chance to score a goal from a short distance without being stopped by any of the opponents, which is a punishment to the opponents for having made a mistake)

- (2) *strafbar forseelse* i visse sportsgrene, fx fodbold og ishockey, som resulterer i, at det hold, som forseelsen blev begået imod, får lov til at skyde eller sparke tæt på modstanderens mål uden at blive generet af modstanderens spillere

(Eng. *punishable act* in certain sports, e.g. football and ice hockey, which results in a situation where the team against which the offence was committed is allowed to shoot or kick the ball from a short distance towards the opponents' goal without being stopped by any of the opponents)

When writing meaning explanations, one of the main questions that arises is how much information should be included in the meaning explanation. According to the function theory, this should be connected to the intended user and the intended user situation. In these dictionary examples, the target user is a native speaker and layman, and the function is reception, at least in the case of NET (unfortunately, most dictionaries do not describe precisely in what situation they are to be used). If a native speaker looks up the word in order to understand what it means, the lexicographer can assume that the average citizen or user will know that it is some kind of punishment that a player gets for breaking the rules. Three of the five dictionaries mention that a penalty occurs in some specific branches of sport, which means that the meaning explanations that they make have to be applicable to all these branches of sport, while others are vaguer and point out that it is used in a number of unspecified sports. This is the main approach in many dictionary projects: to make as broad and encompassing meaning explanations as possible so that the user is left with only one meaning explanation and does not have to search for the right one amongst a number of meaning explanations. However, this neglects the relevance criterion mentioned above, i.e. that the data incorporated in the meaning explanation must satisfy the user (help him solve his problem). If, for the moment, we put the relevance criterion aside, the meaning explanation of *penalty* has to cover all the ball sports in which the penalty occurs, thus the lexicographer needs to find the elements that all these sports share:

1. a player(1) in a ball game (team sport) breaks a rule
2. the referee says (using a certain signal) that a person or team breaking the rule will be punished
3. the punishment is a “free” chance to score a goal or one or more points
 - 3.1 free = not interrupted by other players; however, in some sports, the goalkeeper may try to prevent the player(2) from scoring
4. the player(2) from the opposite team gets the chance to score a goal or one or more points

Point 1 is mentioned in four of the five dictionaries (not in DDO). Point 2 is only mentioned in NET, but it is actually a really important part of the meaning explanation as unless the referee actually decides there is a penalty, there will be no penalty even though a player has broken a rule that should lead to a penalty. Point 3 is problematic as in e.g. handball and football there is a player, the goalkeeper, who is allowed to try and prevent a score, whereas in e.g. basketball, none of the players are allowed to interrupt the shooter while he tries to get the ball in the net. Point 4 is included in all the dictionaries. Thus, the only definite elements that all sports share are points 1 and 4 above. If the user looks up the word *penalty* in Oxford and Cambridge in a reception situation, he will most likely already know what these meaning explanations state. Therefore, more data should be incorporated in order to describe what a penalty is. MacMillan, DDO and NET have all incorporated points 3 and 4. However, MacMillan and our own NET ignore the role of the goalkeeper in certain sports, e.g. football, which is why this meaning explanation is incorrect (the meaning explanation in NET has now been revised). DDO states that only the goalkeeper is allowed to prevent player(2) from scoring, but this is also incorrect in terms of sports such as basketball where there is no goalkeeper. The lexicographer could perhaps instead write that player(2) may not be interrupted by any of the field players, but then again the description does not apply to basketball as the players are not referred to as field players in this sport. A new suggestion for a meaning explanation to be applied in a general language dictionary could be the following:

Meaning explanation of *straffe* (Eng. *penalty*) in a general language dictionary

situation, hvor en spiller af dommeren får tilkendt chancen til at forsøge at få bolden i mål uden at blive hindret af modstanderholdets spillere *eller kun af en eventuel målmand*, hvilket er en straf for modspillerne for at have begået fejl; fx i fodbold, håndbold, basketball og ishockey

(Eng. situation in which the referee gives a player the chance to hit the goal without being stopped by any of the opponents *or in some sports only by the goalkeeper*, which is a punishment given to the opponents for having made a mistake; e.g. in football, handball, basketball and ice hockey)

This meaning explanation could work, but it is still problematic with the mention of a goalkeeper if the dictionary user looks up the word to understand it in a basketball context. In addition to this, in sports like rugby, when a team is awarded a penalty, there are other options than kicking the ball to score points, e.g. instead taking a quick tap penalty or opting for a kick for touch, if the penalty is awarded too far from the opposition's goalposts. These problems could be solved by using a lexical remark field in which comments could be made about the use of the word in each specific branch of sport. This, however, would result in a very long remark that the dictionary user cannot search through easily. For example, if the user wants to know what the meaning of the word *penalty* is in basketball, he would have to read the full lexical remark or at least until he comes across the section that mentions its meaning in basketball. In addition to this problem, in our project the lexical remark field only occurs in the polyfunctional NET used for cognitive situations, not reception situations. The solution may therefore be a completely different one: instead of writing one meaning explanation encompassing the meaning in all branches of sport, we could make more than one meaning explanation of the word in terms of sports.

If we look at the collocations with the lemma in NET, the direction in which the lexicographer is turned is also towards more than one meaning explanation:

- brænde et straffe (Eng. miss a penalty)
- dømme straffe (Eng. award a penalty)
- et kæmpe straffe (Eng. a huge penalty)
- kampen, der blev afgjort med 1,1 sekund igen på to straffe (Eng. the match, which was settled with only 1.1 second left with two penalties)
- kaste straffe (Eng. throw a penalty)
- redde et straffe (Eng. save a penalty)
- score på begge straffe (Eng. score on both penalties)
- score på straffe (Eng. score on a penalty)
- skyde straffe (Eng. shoot a penalty)
- sparke straffe (Eng. kick a penalty)
- straffe for hands (Eng. penalty for hands)
- udligne med to point på straffe (Eng. equalise with two points scored on penalty)

If we consider the collocations “få straffe for hands” (Eng. penalty for hands), “redde et straffe” (Eng. save a penalty) and “sparke straffe” (Eng. kick a penalty), a problem arises as these cannot be applied to the use of the word in a basketball context. These collocations indicate that the circumstances surrounding a penalty in basketball are different from the other branches of sport mentioned in the meaning explanation, e.g. that a penalty can involve two shots. Therefore, the question that again occurs is whether there should actually be more than one meaning explanation for this lemma. If we compare the collocations “kaste straffe” (Eng. throw a penalty) and “sparke straffe” (Eng. kick a penalty), the collocations point towards two different situations: one in which the penalty is performed by throwing the ball, and one in which the penalty is performed by kicking the ball. In addition to these collocations, a look at the synonyms (see Bergenholtz and Agerbo, 2014a, 2014b) also raises the question of the usability of the single meaning explanation approach of penalty: the synonym “penalty shot” is applicable when the word is used about e.g. ice hockey and football, the synonym “penalty free throw” can be used in basketball, and the synonym “penalty kick” is applicable in football. NET contains a synonym remark field in which the lexicographer can make comments about the use of synonyms in the same way as the lexical remark field can be used for remarks about the meaning of the lemma. This means that all synonyms could be applied in the dictionary article for the lemma *penalty* as the synonym remark field specifies how to use the different synonyms and therefore they could all be gathered in one and the same article. In the case of collocations, there is not a specific collocation remark field in NET though there is a text production remark field in which comments can be made about the use of each collocation. Thus, it is possible to construct one dictionary article for *penalty*, but this will require the use of a number of remark fields to specify how to understand and apply the word in different sports, at least:

- a lexical remark field
- a synonym remark field

- a collocation remark field
- a word formation remark field

Let us return to the meaning explanation of *penalty*. It was suggested above that instead of writing one meaning explanation, we could make several meaning explanations of the word in terms of sport for reception use. However, the optimal situation for the user would be to get only one meaning explanation or a few meaning explanations as this is easier and quicker to find in an information tool. This single meaning explanation should, of course, be *exactly* the one that the user is searching for. But if the meaning explanation becomes too broad and simply presents the user with redundant information, this is not the meaning explanation that he needs, i.e. not the one he is looking for. If, instead, in the meaning explanation, the lexicographer provides more detail that corresponds to the data that the user is looking for, the result will necessarily be that a higher number of dictionary articles will have to be produced, and this might result in information overload – the user has to search through a vast number of meaning explanations to find exactly the one he is looking for. Therefore, the optimal situation would be that instead of being presented with all of these meaning explanations, for example 16 meaning explanations of *penalty*, and having to search through these to find the one that is relevant, the user would only get the one that he needs, which could be done via the search options given to the user. A solution to this could be that if for example the user wants to know what a penalty is in the context of handball (in all lexicographic situations, it can be expected that the user knows in what branch of sport his search term is used), he could use Boolean operators in the search field to narrow down his search: penalty AND handball. In the programming process, the lexicographer can determine that not only the lemma field but also e.g. the meaning field and lexical remark field should be searched for results that match the user's search criteria. This kind of search may not leave out all other not-needed meaning explanations, but it will winnow out a large part of them. Thus, it appears that writing a meaning explanation for each branch of sport is a better solution than trying to compress all data into one broad meaning explanation.

The following suggested meaning explanations are connected to each branch of sport:

penalty (1) – basketball (meaning for laymen for reception)

situation in basketball in which a team has committed more than four fouls within a single regulation period (quarter) or more than three within an overtime period and which entails that the person against whom the foul was committed is allowed one or two throws, each hit resulting in one point for his team, from a permanent line on the floor without being hindered by other players and while the time is stopped

penalty (2) – football (meaning for laymen for reception)

situation in football in which the referee awards a player the chance to score a goal by kicking it from the 11-metre penalty mark without being stopped by any of the opposing team's field players, with only the opponents' goalkeeper allowed to use his whole body to try and block the ball from the goal line, which is a punishment given to the opponents for having broken a rule inside their

own goal area, e.g. for tackling an opponent without any contact with the ball, pulling an opponent's T-shirt to prevent him from reaching the ball, or by touching the ball with his hands; the player who causes the penalty is given a direct red card if it is an obvious goal scoring opportunity or if a score is prevented illegally, which means that he is no longer allowed to play in the match, forcing his team to play a man fewer

penalty (3) – handball (meaning for laymen for reception)

situation in handball in which the referee awards a player the chance to score a goal by throwing it from the 7-metre penalty mark without being stopped by any of the opposing team's field players, with only the opponents' goalkeeper allowed to use his whole body to try and block the ball from a place between the goal line and the goalkeeper line, which is a punishment given to the opponents for having broken a rule inside their own goal area, e.g. for pulling an opponent's T-shirt or arm when he jumps into the goal area in an attack situation; in some cases, the player who causes the penalty gets a two-minute suspension, and in case of a very serious offence, the player is given a direct red card and is not allowed to play the rest of the match

penalty (4) – hockey (meaning for laymen for reception)

penalty (5) – ice hockey (meaning for laymen for reception)

penalty (6) – rugby (meaning for laymen for reception)

etc.

Notice the many important differences that are not provided if only one meaning explanation is made instead of meaning explanations based on each sport, e.g. whether the person against whom a foul is committed has to do the shot (basketball, not in handball or football); that the person may be allowed more than one shot (basketball, not in handball or football); that in some sports you kick the ball (football), and in others you throw the ball (basketball) or shoot the ball (handball); and that in some sports you score a point (basketball) while in others you score a goal (football and handball).

The suggested descriptions are rather detailed, but as argued earlier, a user does not look up a word only to be told what he already knows. If we look at the situation of a penalty, several circumstances apart from the ones mentioned above are involved, and these may be things that the user is looking for when seeking help from an information tool:

- What rule was broken – what did the person do?
- How does the referee signal a penalty? (whistling, pointing, shouting...)
- How severe is the punishment that may be given in connection with the penalty in terms of warnings, suspensions, yellow cards and red cards?
- How do you perform a penalty – how is it carried out? (e.g. does the playing time stop, is there a limited amount of time to perform the penalty, do you kick/throw/etc. the ball,

should the ball be placed in a certain spot, does the player have to stand in the same position before shooting or is he allowed to make a run-up before shooting...?)

In these examples, some of the data appears to be more relevant in a reception situation than others: If a person searches for data to help him understand a signal, this is not a reception situation, but an interpretative situation; and if a person is looking for data that can help him carry out a certain act, this is neither a reception nor an interpretation situation, but an operative situation (see Bergenholtz, Gouws & Bothma, 2015). However, even though there is a clear theoretical difference between what something is (for reception) and what to do with it or how to do it (for acting), it can sometimes be difficult to draw an exact line between this data in practice. This was for example the case when deciding what data should occur in the explanation of what a penalty is, cf. the suggested meaning explanations of *penalty* in basketball, football and handball. The four points above demonstrate that for many sports related terms, not only communicative and cognitive situations should be accounted for, but also interpretative and operative situations. Sometimes dictionaries include the different types of data in the same description and thus try to fulfil several different dictionary needs at the same time. This may not be as bad as leaving out necessary information, but if too much is provided, the user will instead suffer from information overload. If a person (layman, semi-expert or expert) is writing about something related to sports, it is normally always a specific field (basketball, tennis, rugby, cycling etc.), and therefore he will search for data about this specific sport in an information tool. In the case of a penalty in relation to a reception situation, the user will have come across the word in a specific text, e.g. about a football match, and therefore he is interested in its exact meaning in football; he does not care about its meaning in other branches of sport. Even if you have the “same” words in handball, football, basketball etc., they are in reality different and are used quite differently within different branches of sport, e.g. with different collocations, different synonyms and with different meaning explanations. Therefore, what is needed is a single field (in terms of sports) information tool; one that does not try to describe all branches of sport in the same go, but describes each branch separately.

The dilemma that occurs when writing multi-field (in terms of sports) meaning explanations can be further exemplified with the lemma *red card*. In Cambridge and Macmillan, the meaning explanations are limited to football/soccer, and in DDO, the meaning explanation is limited to football, whereas both Oxford and NET vaguely state that the terms *red card* is applied in some sports/games. All of the dictionaries mention that a red card indicates that a player is sent off the field (because he has done something wrong):

Example 4: rødt kort (Eng. *red card*)

Cambridge Advanced Learner's Dictionary & Thesaurus, British English (Cambridge)

In football, a small, red card that is shown by the referee (= the official who is responsible for making certain that the rules are followed) to a player who has not obeyed a rule and who is therefore not allowed to continue playing

Macmillan English Dictionary for Advanced Learners (Macmillan)

a card shown to a football player who has done something wrong, ordering them to leave the field

Oxford British & World English Dictionary (Oxford)

(In soccer and some other games) a red card shown by the referee to a player who is being sent off the field

The Danish Dictionary (DDO)

kort som en fodbold- eller håndbold dommer viser når han udviser en spiller

(Eng. card which a football or handball referee shows when he dismisses a player from the field)

The Danish Internet Dictionary (NET)

lille rødt kort, der anvendes af dommeren inden for visse sportsgrene til at udvise en spiller resten af kampen, fordi denne har foretaget en eller flere handlinger, der bryder spillets regler; man kan enten få direkte rødt kort, fordi en handling er særligt grov, eller få tildelt rødt kort efter en forudgående advarsel eller flere to minutters udvisninger

(Eng. little red card that is used in certain sports by the referee to dismiss a player the rest of the match because s/he has committed one or more acts with which s/he has broken the rules of the game; you can either receive a direct red card or a red card after a preceding warning or several two-minute suspensions)

Two serious mistakes have been made in the production of these five meaning explanations (the meaning explanation in NET has now been revised):

1. The meaning explanations are too narrow: They focus too much on specific sports such as football and handball, thus they are not useful for all sports in which red cards are used (in Denmark and England, one of the most popular sports is football and therefore most corpus examples would probably have included the word used in a football context)
2. The meaning explanations are too superficial: For example, they do not mention what specific situations or acts that entail a red card (in some sports, if a player does something wrong (Macmillan) or has not obeyed a rule (Cambridge), he gets a yellow card as in football or a short and temporary suspension as in handball, not a red card immediately)

If we consider the first point, a red card does not always mean that a player has to leave the field straight away. For example, in badminton, a player who receives a red card has made a fault and the opponent is awarded a point. It is not until the second red card is awarded that the player may be disqualified with a black card. In race walking, a red card indicates that a judge has assessed that a participant has made an incorrect movement. However, this card is not shown to the competitor, and it is not until three different judges each has given the same person a red card that s/he is disqualified, which is communicated by the chief judge by showing a red card or red paddle to the person. In some sports where there is a head coach or team leader, this person can also be given a

red card and then the punishment that this card entails is given to one of the players, i.e. it is not only a player or competitor that can be given a red card. This means that the meaning explanations above have to be broadened in order to encompass all sports:

Meaning explanation of *rødt kort* (Eng. *red card*) in a general language dictionary

Suggestion 1:

a small and square card with a red colour that is shown by the referee to a player, competitor or coach to indicate a serious offence committed by this person

Suggestion 2:

a small and square card with a red colour that is shown by the referee to a player, competitor or coach to indicate a serious offence committed by this person that often results in the person being permanently suspended from the match or contest

The first suggestion simply mentions the shape and colour of the card, the person who issues it, the person who is penalized, and (vaguely) why it has been given to the person. The second suggestion includes the typical consequence of receiving this card. Though the word *often* is included, the examples from badminton and race walking above demonstrate that generalizing the consequences of the red card is problematic: If a user looks up the word/term after having read a newspaper in which it says that a badminton player received a red card in a match, the meaning explanation will be of little help.

If we consider the second point above, we come across the same problem with the lemma *red card* as was seen for the meaning explanations of the lemma *penalty* (Example 3): If the meaning explanation is too broad, it also becomes too superficial. Yes, more data could be provided in a lexical remark field (see the lexical remark in NET for the lemma *red card*), but this is not an optimal solution, cf. Example 3. A different solution could be to make a number of lexical remark fields available in the database, thus having a lexical remark for each branch of sport in which a red card is used. However, as mentioned earlier, in our project, lexical remarks are only applied in the polyfunctional dictionary NET, not The Danish Meaning Dictionary. Therefore, the information about each branch of sport would not be available to the user in a reception situation in which The Danish Meaning Dictionary is supposed to be used.

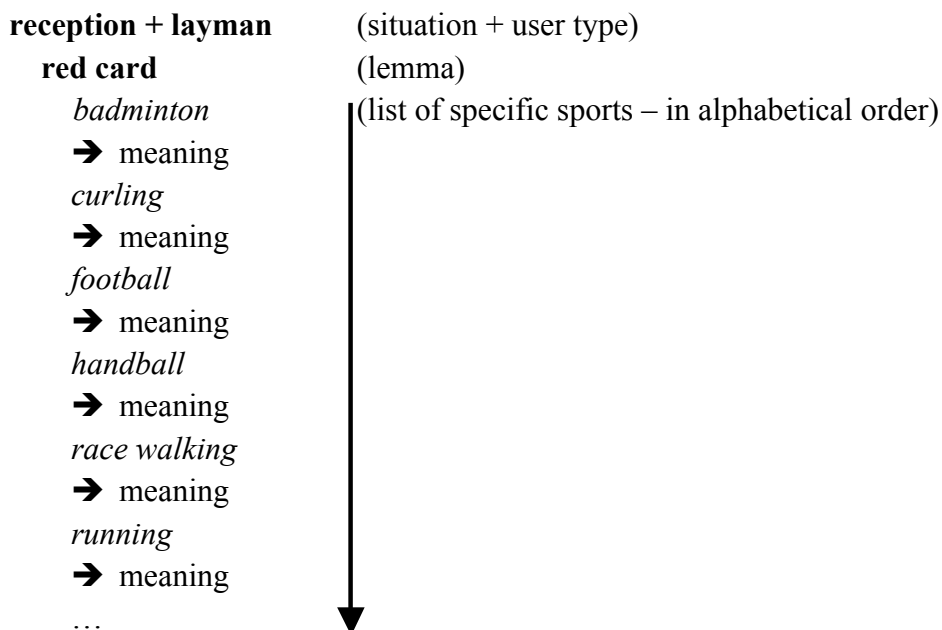
It may be assumed that a person who looks up the lemma *red card* will (in many cases) already know that it is given to a sportsman or an athlete who has made a mistake and violated the rules. Thus, the five meaning explanations are not to very much use if the dictionary user looks up the word in order to understand its meaning, i.e. in a reception situation. As for *penalty*, we can list a number of different pieces of information that a user could be looking for when looking up *red card* in an information tool:

- What rule was broken – what did the person do?

- Is a distinction made between a direct red card and a card following one or more previous warnings?
- Is the red card used with other cards, e.g. a yellow card and/or a black card?
- What is the consequence *in* the actual match/contest?
- Is there a consequence/what is the consequence *after* the match/contest?

Though the five meaning explanations above of *red card* are applicable to its use both in football and handball, a handball player is not punished further after the match, but a football player is (he is not allowed to play a number of the following matches in the same tournament); a handball player is not punished with a red card when breaking a rule after already having received a yellow card (he gets a two-minute suspension), but a football player is; and a handball player having received a red card may be replaced with a new player after the two-minute suspension, but in football, the team is one man short the rest of the match. All of these pieces of data are part of the meaning of *red card*, but are left out in most meaning explanations of the word because if they were provided, one meaning explanation of the lemma would not be enough.

If more than one meaning explanation were to be provided, it could be written as a polyseme to the lemma *red card* in the same way as (other) polysemes are presented in e.g. our general language dictionary NET. However, in the development of a concept for a new information tool on biomechanics and sports science (Bergenholtz & Agerbo, 2015), the meaning explanations are presented to the users in “folders” that can be opened and contain other folders so that a user can make his own selection of a branch a sport and also according to his user profile:



4. Developing the concept for a number of e-tools on biomechanics and sports science

In the Centre of Lexicography, we have been planning a project on biomechanics and sports science that will involve the production of a number of information tools that each will be designed to encompass one of the four mentioned functions as well as one of three different user types (layman, semi-expert and expert) in English and in Chinese (Bergenholtz & Agerbo, 2015). In this project, the plan is to make a systematic division of sports into different types of sport. It will be possible to make a search in all branches of sport at the same time, but the main focus will be the single branches, i.e. each branch will be made separately. This means that for example in the case of *red card*, the user can type in this term in the search field and either search in all branches, thus meaning explanations from all the branches in which the red card is used are presented to the user, or in a specific branch of sport, e.g. football, thus only getting one meaning explanation. It will be possible to extract a separate information tool for each branch of sport; this would fulfil the need for distinctive tools as was demonstrated in Examples (3) and (4) in this contribution. In certain cases, a distinction will be made between the data for laymen and semi-experts (experts do not look for the same kind of data as laymen and semi-experts as they already know most things about their field of expertise – at least if they are to be considered real experts). This is for example necessary in the introduction to each scientific field or branch of sport and also in the meaning explanations. As the concept for this project is quite original and as the interpretative and operative functions have not yet been investigated much, there are still a lot of questions that need to be answered. One of these is in what situations we should provide different data for laymen and semi-experts. For example, as we cannot imagine any interpretative situations in which there will be a difference between laymen and experts, we have decided only to include one field in the database for interpretative data aimed both at laymen and semi-experts, but in terms of operative data, the data will be different. This means that the number of fields to incorporate in the database is yet not finally settled. As can be seen in Bergenholtz & Agerbo (2015), the current plan of the database contains 54 fields. In addition to the number of fields, we also need to consider what the optimal way for our users to search for interpretative data could be. In terms of written data, we could make the system search different fields in the database when a user narrows down his search using Boolean operators as in the dictionary Tell Me the Word I Am Looking for. For example, if the dictionary user wants to know what a signal made by a basketball referee means, he could type in the sport and describe the signal: basketball AND “up and down” AND “flat hands” (this should result in the lemma *illegal dribble* and its synonym *double dribble*). We may also make it possible to compare visual searches to images stored in the database, e.g. if the user in a live match takes a photo of the referee making the mentioned signal, he can transfer this to the dictionary search field and make a search based on an image.

Of course, we could create a similar dictionary concept in which all the tools would be monolingual. This would be less complex to work with than the one mentioned above and described in Bergenholtz & Agerbo (2015). Whether or not the above-mentioned English-Chinese project will become a reality, I intend to continue developing the concept for a Danish (or English) database from which a number of Danish information tools aimed at laymen can be extracted, e.g. (1) an information tool to help a layman understand a sign, (2) an information tool to help a layman

understand a text, and (3) an information tool to help a layman perform a certain act. Each information tool will be structured differently as only the fields relevant for the specific tool will occur in it. Currently, the fields for the database are the following, but this is not the final solution:

Database fields	
1. Main scientific fields (roll down list with the main scientific fields)	
2. Branches of sport (roll down list with described sports fields)	If for example we want to create information tool (3), i.e. to help a layman perform a certain act, only fields (3), (9) and (10) should be used - field (4) should perhaps also be included
3. Lemma	
4. Meaning for laymen	
5. Remark(s) to the meaning for laymen (= lexical remark field)	
6. Internet link(s) to the meaning for laymen	
7. Introduction to the scientific field or specific branch of sport for laymen	
8. Link to a certain place in the laymen introduction to the scientific or sport field	
9. Operative data for laymen	
10. Operative data for laymen as pictures and video clips	
11. Interpretative data for laymen	
12. Interpretative data for laymen as pictures and video clips	
13. Grammar for the lemma	
14. Remark(s) to grammar	
15. Word formation / term formation	
16. Synonym(s) for the lemma	
17. Remark(s) to synonym(s) for the lemma	
18. Collocations with the lemma	
19. Remark(s) to collocations with the lemma	
20. Examples with the lemma	
21. Memo field	

in this information tool. This information tool could be called How To Do It or How Should I Do It? A preliminary dictionary article for *goal kick* in this dictionary would look like this (the meaning and acting explanations should include more detail, especially the acting explanation):

goal kick

meaning

in football, a situation where the goalkeeper or one of his team players starts the game after an interruption that occurs when: (1) the ball passes the goal line of the defending team either in the air or on the ground, (2) the ball is last touched by a player on the attacking team, and (3) no goal has been scored

acting

a goal kick is taken by the defending team, typically the goalkeeper, by laying the ball on the ground somewhere in the goal area (it must lie still) and kicking it either as a flat kick or a high kick, as a short kick or a long kick, and either with or without a run-up to the ball, thereby trying to play it to a teammate, while all other players stay outside the penalty area until the game has been started again, i.e. when the ball is kicked out of the penalty area



Photo: Taking a goal kick

The technical aspects behind a goal kick (this is a link to an online video)

Communicative and cognitive situations are familiar in lexicographic literature whereas operative and interpretative situations have not been investigated much nor written much about though these two types of situations are not unfamiliar; most people have used a handbook e.g. when they had to use an electronic device for the first time, or when they had to repair their own car. As this database is to be used for Danish data, fields (14), (15) and (19) are included, but these do not occur in the English-Chinese database. In Danish, it may be necessary to provide a grammatical comment (field 14) on the prescribed use of a word according to the Danish Language Council in contrast to the actual use of the word within the specific scientific field or everyday use; for example, according to the official Danish Spelling Dictionary (produced by the Danish Language Council), the word *fodbold* (Eng. *football*) is countable; however, this dictionary does not distinguish between the meanings ‘football as a sport’ and ‘the ball with which you play the game football’ because in the former case, *fodbold* is uncountable, whereas in the latter case, *fodbold* is countable; thus, these are two different lemmas, cf. Bergenholtz & Agerbo (2014c). In Danish, it is relevant to have a field with word formations (field 15), for example if a user wants to know what the player who shoots a penalty in a match is called (this word is *straffeskytte*, i.e. *straffe* + *skytte*, not *straffeskyder*, i.e. *straffe* + *skyder*, which some may think). However, in some cases we do not form new words, but instead new terms, e.g. the lemma *coach* with the “term formation” *head coach* (not *headcoach*). Though there is a linguistic distinction between the word formation and what could be called “term formation”, this is irrelevant to the user and therefore these two types of formations can be applied in the same database field. Remarks to collocations (field 19) are particularly important if no distinction is made between different branches of sport in the meaning explanations, collocations,

etc., but also useful even if this distinction is made, which is the plan. You cannot “sparke straffe” (Eng. kick a penalty) in handball as you can in football, but the collocation “skyde straffe” (Eng. shoot a penalty) is used more in football than “sparke penalty” (Eng. kick a penalty), and this should be mentioned in a collocation field to be shown in an information tool for text production. Instead of one general collocation field and one general synonym field that occur in the database for the six Danish Internet Dictionaries, this database would include a collocation remark field for each collocation and a synonym remark field for each synonym; not all of them will be used (it will most likely not be necessary to comment on each collocation), but it will be possible for the lexicographer to write one for each if necessary. The lexical remark field (field 5) is not needed for distinguishing between the use of the word in different branches of sport as suggested in one of the solutions above for the presentation of the lemma *penalty*. Instead, it can be used in cognitive situations to write more about the given branch of sport, e.g. if there is a difference between the use of the red card in children’s football and in professional football respectively.

When creating a database, it is difficult to create a new field after the database has been finished and the project has started. In contrast, if a field is created from the beginning, but is not put into use during the actual work, no harm is done; it is simply not used. Therefore, if there is any doubt about the usefulness of a field, it is better to include it than leave it out only to find out later that it is needed.

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