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Classical definability and the monosemic bias*

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Lexical semantics cannot at the same time retain the monosemic bias and the ideal of classical definability: there exist cases where sticking to the intuitively plausible idea that a particular lexical item is univocal leads to the conclusion that it cannot be classically defined. This claim will be supported by means of a corpus-based case-study involving denotational data based on non-elicited actual usage. Within this methodological framework, a procedure for determining classical definability will be demonstrated that operationalizes the requirement that definitions be both general and distinctive.

1. Polysemy and Definability

Definability plays an important role in current discussions about lexical categories, if only because it is intimately related to the problem of polysemy. Lexical-semantic research is to a large extent guided by a 'monosemic bias': the idea that postulating a single meaning for a lexical item is, on the whole, preferable over postulating multiple meanings. Authors who have recently defended this position with varying degrees of explicitness include Charles Ruhl (1989), Anna Wierzbicka (1985, 1991), and Claude Vandeloise (1990). As Chris Sinha has pointed out (p.c.), the monosemic bias is related to Grice's 'Modified Occam's Razor': the principle that senses are not to be multiplied beyond necessity (Grice 1989:47). The monosemic bias is not universal, however. In my own work on lexical semantics, for instance, I have had a tendency to stress the presence of polysemy (for instance, see Geeraerts 1989, 1990) and it has been argued (Landheer 1991) that I have so to speak exhibited an undue polysemic bias.

Now, the monosemy/polysemy issue is complicated by various factors, two of which stand out. First, there may be various criteria for deciding about the presence of monosemy. In Geeraerts (1993), an overview of some of the most common criteria is given (and it is shown that they are mutually inconsistent). Second, there is variation as to the level of semantic analysis with regard to which the monosemy question is defined. Most linguists, in fact, would seem to be willing to accept a

two-stage model in which a distinction is maintained between, roughly, permanently stored 'deep structure meanings', and 'surface structure meanings' that can be derived from them on the basis of cognitive and pragmatic principles of semantic extension interacting with situationally and textually contextual factors. If the monosemy issue is defined with regard to the stored readings, different solutions will be arrived at in comparison with a situation in which it involves surface structure interpretations. In the former case, for instance, one could say that something is not a different reading when it can be derived by rule from a stored reading (cf. Kempson 1977). In the latter case, on the other hand, one of the possible criteria for semantic difference rests on the possibility of capturing all surface readings of an item under a single definition.

Without trying to solve the problem of monosemy as a whole, the present paper will try to shed some light on the latter test of polysemy, viz. the *definitional test of polysemy* that says that two or more instances of a word do not constitute a different reading when they can be defined together as a single meaning. In particular, it will be demonstrated, first, how the criterion can be applied to usage-based data about the referential range of application of lexical items, and second, that applying the criterion involves more comparative computation than is usually assumed. Third, this demonstration will support the claim that *lexical semantics cannot at the same time preserve the monosemic bias and the ideal of classical definability*: cases will be presented where sticking to the intuitively plausible idea that a particular lexical item is univocal leads to the conclusion that it cannot be classically defined.

This claim will be illustrated on the basis of a corpus consisting of 9000 Dutch clothing terms, taken from fashion magazines and general magazines published in 1991. A full description of the project is presented in Geeraerts et al.; the present paper corresponds in large part with section 3.2. of the monograph. In the database, each garment is present in the form of a componential description. The descriptions are based on photographs (or, occasionally, drawings) that appear in the magazines; only words referring to such pictures have been included in the database. The componential system of description differs somewhat according to the major subtypes of clothing.

It should be clear from this presentation that the approach followed here is a referential, denotational one: lexical meanings are studied not primarily through introspection, but on the basis of their ranges of application as they appear in actual usage. The *referential, usage-based investigation* followed here is not accepted unconditionally by all lexical researchers. In actual practice, lexical studies with a Cognitive Semantic orientation exist both in the form of introspective analyses, and in the form of corpus-based research. Schmid (1993:272) even considers the corpus-based approach in work such as that of Rudzka-Ostyn (1988, 1989), Schutze (1988, 1991), and Dirven (1985, 1990) to

be typical of the European branch of the Cognitive Linguistic movement, in contrast with the more introspectively conducted studies of American researchers of a Cognitive Linguistic persuasion. From a more theoretical point of view, explicit attention for the way words are actually used would seem to follow straightforwardly from Langacker's characterization of Cognitive Linguistics as a usage-based model that rejects the Chomskyan neglect of linguistic performance (1987:46). However, Wierzbicka (1985) has couped a prototype-oriented form of lexical research with an explicit defence of the introspective method. What advantages, then, are there to a referential, usage-based approach that avoids relying exclusively on introspection? Next to the advantages of a usage-based investigation that are enumerated by Ruhl (1989:13-16), let us note that the introspective method may succeed rather well in pinning down the prototypical core of the items under investigation, but is hardly able to capture the peripheral uses to which the core meanings appear to give rise in actual usage. This is a point to which we will return in section 4.

2. *Criteria for Classical Definability*

The definitional criterion only works properly when restrictions on definitions exist: there has to be a way of assessing what is a good definition before definability can be invoked as a measure of polysemy. Classical definability implies that a definition can be found that characterizes all the members of the category to be defined, and only those. The definition has to be *general*, in the sense that it applies to all the members of the category, and it has to be *distinctive*, in the sense that it adequately distinguishes the category from all others. For instance, let us assume that we are trying to define the category 'bird' (as a biological species). We will then have to list the attributes that all birds have in common, if there are any; further, we will have to make out whether this list of attributes (or any subset of it) suffices to distinguish birds from mammals, reptiles, and fishes, to say the least. As illustrated in Geeraerts (1987), the attributes that one would be inclined to mention as general characteristics of birds, often do not have the required commonality. On the other hand, the attributes that do seem to be general among birds do not suffice to distinguish birds from other species; even when the features in question are taken together, the duck-billed platypus is a counterexample to the alleged definition.

It may be useful to point out here that there are various other ways of terminologically indicating the classical nature of definitions. One is to say that classical definitions define *all and only* the members of the category, while another is to say that they *uniquely* define the category. More importantly, however, it has to be noted that applying the definition meets with particular problems in the case of our material. Before turning to actual examples, let us consider each of the two

requirements in more methodological detail, with specific reference to the kind of material incorporated in the database described above.

The first part of the joint requirement of generality and distinctiveness would seem to be easy to check: the componential description of the referents of each lexical item allows us to check whether there are any attributes that these members have in common. There is an important reason, however, for rejecting such a straightforward and mechanical procedure. The descriptive features that define the various configurations in the referential range of a lexical item cannot be taken at face value, but have to be *interpreted* (as an automatic consequence of which, the issue of classical definability cannot be settled mechanically). There are basically two forms of interpretation to be taken into account. For ease of reference, they will be called the quantitative and the qualitative one. The *quantitative* interpretation involves numerical dimensions, i.e. dimensions whose values constitute a graded continuum. The crucial point here is to see that it is not the individual value of a specific referent with regard to that dimension that is definitionally important, but rather the range of values with which the dimension occurs. If, for instance, a dimension like WIDTH receives the values [2], [3], and [4] in the semasiological range of application of an item, we should not say that the item has no common feature on the dimension WIDTH, but we should rather say that the width of the referents of the item in question ranges from value [2] to [4]. Although the presence of the values [2], [3], and [4] would superficially suggest that the referents of the item do not have common characteristics as far as their width is concerned, they do upon closer inspection: all of them fall within the range defined by the interval [2]-[4]. On the other hand, a *qualitative* reinterpretation of the superficially given values involves hidden variables. In particular, whereas all the dimensions in the database are visual ones, there may be covert dimensions of a functional nature. For instance, if the MATERIAL dimension of an item features the values [silk] and [cotton], there is again, superficially speaking, no common characteristic. If, however, both silk and cotton are used as light materials serving the purpose of keeping the person cool in warm weather, the common functional feature [light and cool] reduces the original variation on the MATERIAL dimension to epiphenomenal status.

The distinctiveness criterion for classical definability should be handled with equal care. To begin with, notice that the distinctiveness requirement crucially involves *negative* evidence. If a definition is to hold for all and only the members of a particular category, the definition should not apply to any specific thing that does not belong to the category. The distinctiveness of the definition is contradicted, in other words, if we can find a referent that falls within the scope of the definition but that falls outside the scope of the category. This does not mean, to be sure, that the items falling within the scope of the definition

could never occur as members of other categories than the one to be defined. For instance, let us define the attributes *plusquint* and *decimus* of natural numbers. A natural number is *plusquint* if it is larger than five; it is *decimus* if it is smaller than ten. Both definitions are classical: they are as mathematically precise as you can get. At the same time, both categories naturally overlap: the natural numbers 6, 7, 8, and 9 fall within both categories. This means that the number 7 may sometimes be called a *plusquint* and sometimes a *decimus*. Suppose further that we have actually encountered both ways of speaking in our corpus of mathematical language, and that we are trying to define the word *decimus*. We have noted that all *decimus*es share the property of being smaller than ten, and therefore propose to define *decimus* accordingly; we also notice, however, that 7 is sometimes called a *plusquint*. When confronted with such a *plusquint* instance of 7, could we then say (repeating the sentence introduced above) that 7 falls within the scope of the definition of *decimus*, but that it falls outside the scope of the category (because it is not then called a *plusquint*)? Of course not: falling outside the scope of the category means *never* occurring within it. The number 7 is not a counterexample to the proposed definition of *decimus* because it is occasionally called a *plusquint*, but it would be a counterexample if it were never called a *decimus*. In the same way, the duck-billed platypus is only a counterexample to the classical definability of *bird* because it is never categorized as a bird. At the same time, the fact that not all *decimus*es can be called *plusquint* implies that the definition of the latter category should not be so broad as to include the entire range of application of *decimus*; it must include those *decimus*es that are sometimes called *plusquint*, but it must exclude those that are never so called.

As a practical consequence of this observation, we will have to check any alleged classical definition of a lexical item against the words with which the item referentially overlaps. In particular, the definition should not be overly general, in the sense that the entire overlapping category (rather than just the intersecting part) is drawn into the category to be defined. The relationship between two items that share referents may, however, take other forms than the kind of *overlapping* (partial co-referentiality, semi-synonymy) that is illustrated by the *plusquint/decimus* case. Systematically, there are three other relations to be envisaged. When the items are *synonymous*, no problem arises when the definition of the definiendum covers the entire range of application of the second item. Similarly, when the definiendum is a *hyponym* of the second item, the definition may (in fact, must) cover all the referents of the second item. But when the definiendum is a *hyponym* of the other word, a definition that exceeds the referential boundaries of the hyponymous item will have to be rejected. To summarize, the distinctiveness criterion does not apply to the synonyms and the hyponyms of the definiendum; in the case of overlapping and

hyperonymous categories, it should only be applied to the overlapping and hyperonymous categories as a whole, not to those subsets of the latter that they share with the definiendum.

3. Absence of Classical Definability

Now that we have a better idea of how the classical definability of lexical items can be established, actual examples can be considered. Specifically, the following examples involve items that cannot be defined on a classical basis. The discussion will be based on a subset of the field of clothing terminology. In particular, we will consider pieces of clothing that cover the upper part of the body, that can be entirely opened at the front, and that are never worn as the first layer of clothing above the underwear. The items with the highest frequencies in this subset are *jack*, *colbert*, *blazer*, *jasje*, and *vestNL*. The distinction between *vestNL* and *vestB* is necessary because there is a marked difference between the ways in which the item *vest* is used in the Belgian and the Netherlandic sources; we will come back to this point below.

Fig. 1 gives an overview of the ranges of application of the items. The dimensions used in the figure do not necessarily reproduce the information structure of the database in a straightforward manner, but may be the result of a reinterpretation of the stored data or even a reconsideration of the original pictures. Dimensions that are not distinctive within the subset have been left out. For instance, all the types of clothing included in the subset are worn by men and women alike; accordingly, the dimension SEX has not been retained in the figure. A plus sign means that a particular dimensional value occurs within the range of application of the item; a minus sign indicates that it never occurs. Thus, plus signs on all values of a particular dimension mean that both values may occur. For instance, the referents of *jasje* may either occur with a type of fastening that can be fastened up to the neck, or with a type of fastening that stops on the chest somewhat lower than the neck; by contrast, *jack* is never used as a name for garments that cannot be fastened entirely. The only dimensions in the overview for which the relevant values might have to be restated in terms of ranges are LENGTH and FASTENING, since both involve measures of length; for instance, the referents of *jasje* have a fastening whose length ranges from up to the chest to up to the neck. The other dimensions consist of discontinuous values.

A first thing to note is that the referential ranges included in fig. 1 suggest the existence of certain hyponymy relations. It appears, for instance, that all dimensional values that occur in the range of *jack* also occur in the range of *jasje*; at the same time, the latter item exhibits a number of dimensional values that are absent in the case of *jack*. In this particular case, the suggestion that *jack* is a hyponym of *jasje* (because

the referential range of the latter word includes that of the former) is supported by the intuition that *jasje* is a cover-term for the entire set of items included in 4. However, the overview in the figure is not really a good way of settling the hyponymy relations among the items, because the referential ranges are being considered in terms of separate dimensions rather than dimensions in combination. Consider a fictitious case in which an item A is represented by the referential types [ac] and [bd], and an item B by the types [ad] and [bc]. In both cases, the first dimension ranges over the values [a] and [b], and the second dimension over the values [c] and [d]. Judging on the basis of an overview of dimensional ranges, then, A and B would be synonymous, since they have the same dimensional ranges. Judging on the basis of the clear that there is neither a relationship of synonymy nor hyponymy between both items. It is therefore necessary to establish hyponymy relations on another basis than fig. 1 as such

	jack	colbert	blazer	vestNL	jasje
length	-	-	+	+	+
shorter than the waist	+	-	+	+	+
as long as the waist	+	+	+	+	+
lower than the waist	+	+	+	+	+
cut	+	-	-	-	+
blousing	-	+	+	+	+
wide and straight	-	+	+	+	+
narrow and straight	+	+	+	+	+
waisted	-	+	+	+	+
material					
woven fabrics	+	+	+	+	+
knitted	-	-	+	+	+
leather	+	-	-	-	+
fastening					
up to the neck	+	-	-	+	+
lower than neck	-	+	+	+	+

Figure 1. The semasiological ranges of *jack*, *blazer*, *colbert*, *vestNL*, *jasje*.

A corpus-based approach for the recognition of hyponymous relations may be established as follows. If A is a hyponym of B, B may

occur as an alternative name for all referents of A. Of course, B need not be as frequent as A for the referential set in question, because A may be more entrenched than B. Also, it may be expected for statistical reasons that the less common referential types of A may not occur in the corpus with B as an alternative denomination; in actual practice, it may be sufficient to establish that B occurs as an alternative for the most common referents of A. In fig. 5 and fig. 6, such overviews of onomasiological alternatives are given for *blazer* and *colbert*. Given the statistical margin that was just mentioned, it can be deduced from the figure that *colbert* is a hyponym of *blazer* and *jasje*, and that *blazer* is a hyponym of *jasje*. At the same time, of course, it should be established that there are cases of B that are not named by means of A (lest a situation of synonymy rather than hyponymy obtains). This type of information, however, can be safely derived from overviews like the one in fig. 1: for instance, the plus sign on the 'knitted' value of the dimension MATERIAL for *blazer* as opposed to the minus sign for *colbert* indicates that knitted referents of *blazer* never occur with the name *colbert*, for the simple reason that the referential range of *colbert* does not include knitted garments of any kind.

<i>Colbert</i> : con-figurations	Frequency for <i>colbert</i>	<i>Blazer</i> as alternative	<i>Vest</i> as alternative	<i>Jasje</i> as alternative
B1121m	1	-	-	-
B1122v	7	+	-	+
B2111m	2	+	-	+
B2121m	52	+	-	+
B2121v	4	+	-	+
B2122v	17	+	-	+
B2131m	5	+	-	+
B2211m	1	-	-	-
B2212m	1	-	-	-
B2221m	13	+	-	+
B2222m	1	-	-	+
B2222v	4	+	-	+
C3212m	1	-	-	+
C3311v	3	-	-	+
C3312v	1	+	+	+

Figure 2. *Blazer*, *vest_{NL}* and *jasje* as onomasiological alternatives for *colbert*.

<i>Blazer</i> : con-figurations	Frequency for <i>blazer</i>	<i>Vest</i> as alternative	<i>Jasje</i> as alternative
B1122v	10	-	+
B1222v	10	-	+
B2111m	2	-	+
B2111v	1	-	+
B2112v	17	-	+
B2121m	5	-	+
B2121v	14	-	+
B2122v	48	-	+
B2131v	3	-	+
B2132v	8	-	+
B2212v	12	-	+
B2221m	3	-	+
B2222v	22	-	+
B2232v	5	-	+
C2212v	1	+	+
C1312v	1	-	+
C2311v	1	+	+
C2312v	7	+	+
C2322v	1	+	+
C2332v	1	+	+
C2412v	1	-	+
C3212v	1	-	+
C3312v	14	+	+
C3332v	1	+	+
C3412v	4	-	+
C3432v	1	+	+

Figure 3. *Vest_{NL}* and *jasje* as onomasiological alternatives for *blazer*.

Repeating the procedure illustrated in 5 and 6 for the items *jack* and *vest* leads to the hyponymy relations that are charted in fig. 4. (The label '+lh' indicates that there is a relationship of hyponymy between the items in question, given that a lexical test of hyponymy as illustrated in 5 and 6 is used. The label '-lh' signals the absence of hyponymy according to the lexical criterion.)

hyponym:	jack	colbert	blazer	vestNL
hyperonym:				
colbert	-lh			
blazer	-lh	+lh		
vestNL	-lh	-lh	-lh	
jasje	+lh	+lh	+lh	+lh

Figure 4. The hyponymy relations between *jack*, *blazer*, *colbert*, *vestNL*, *jasje*.

The definitional question regarding the five items can now be made more precise: can the items be classically defined on the basis of the overview in 4 without obscuring the lexical relations summarized in 7? This involves reviewing all possible classical definitions of the items and checking whether they respect the relations in 7. Note, however, that only two of the four dimensions included in fig. 1 can be used to establish classical definability. Whereas the values on the LENGTH and the FASTENING dimension can be expressed in terms of ranges, any reference to the other two dimensions automatically involves disjunctive values; therefore, including these dimensions in the definition inevitably turns the definition into a non-classical one. Thus, it will be sufficient to investigate only the potential definitions that refer to the dimensions LENGTH and FASTENING. A further restriction follows from the specific position of *jasje*. Both from the point of view of the featural ranges given in 4 and from the point of view of the lexical relations specified in 7, *jasje* appears to act as a cover-term with regard to the other items: it is a hyperonym of the other four, and the row of plus-signs accompanying *jasje* in 4 indicates that it indeed includes all definitional possibilities that are relevant for the other items. In this sense, the search for classical, distinctive definitions may be confined to the other four items. In all of the potential definitions mentioned below, then, *jasje* 'jacket' will be used as a cover-term; roughly, it may be defined as referring to garments that cover the upper part of the body, that can be entirely opened at the front, and that are never worn as the first layer of clothing above the underwear.

The definitions that are to be taken into account may be systematically grouped together in three sets: definitions that refer only to the dimension LENGTH, definitions that refer only to the dimension FASTENING, and definitions that involve both dimensions at the same time. For ease of reference, we will call *jack₁* the definition that involves LENGTH, *jack₂* the definition that involves FASTENING, etc.. All in all, the following twelve definitions have to be considered.

Jack₁

Jasje whose length ranges from the region of the hip to the region of the upper part of the legs

Jack₂

Jasje that can always be fastened up to the neck

Jack₃

Jasje whose length ranges from the region of the hip to the region of the upper part of the legs, and that can always be fastened up to the neck

Colbert₁

Jasje that reaches down to the region of the upper part of the legs

Colbert₂

Jasje that can only be fastened as far as the chest (but not up to the neck)

Colbert₃

Jasje that reaches down to the region of the upper part of the legs and that can only be fastened as far as the chest (but not up to the neck)

Blazer₁

Jasje whose length ranges from the waist to the region of the upper part of the legs

Blazer₂

Jasje that can only be fastened as far as the chest (but not up to the neck)

Blazer₃

Jasje whose length ranges from the waist to the region of the upper part of the legs and that can only be fastened as far as the chest (but not up to the neck)

Vest₁

Jasje whose length ranges from the waist to the region of the upper part of the legs

Vest₂

Jasje with a fastening whose length ranges from the up to the chest to up to the neck

Vest₃

Jasje whose length ranges from the waist to the region of the upper part of the legs and that has a fastening whose length ranges from up to the chest to up to the neck

These twelve definitions may occur in 81 (=3⁴) combinations. That is to say, the general definability question boils down to 81 questions of the type: if *jack* is defined as *jack*₁, *colbert* as *colbert*₂, *blazer* as *blazer*₂, and *vest* as *vest*₁, do the lexical relations that follow from these definitions then conform to the actual relations that are summarized in fig. 4? Or, in other words, is there at least one combination of the twelve classical definitions that makes the right predictions about the attested lexical relations? Rather than considering all 81 possibilities separately, it can be shown in the following way that the question has to be answered in the negative.

First, consider all combinations of two elements from among the set of definitions that refer only to LENGTH. The co-occurrence of *jack*₁ and *colbert*₁ is to be excluded, because this would counterfactually imply that *colbert* is a hyponym of *jack* (as the range of LENGTH for *jack* as defined includes the range as defined for *colbert*). The co-occurrence of *jack*₁ and *blazer*₁ is to be excluded because it would imply that *jack* is a hyponym of *blazer*. The co-occurrence of *jack*₁ and *vest*₁ is to be excluded because it would imply that *jack* is a hyponym of *vest*. The co-occurrence of *colbert*₁ and *vest*₁ is to be excluded because it would imply that *colbert* is a hyponym of *vest*. And the co-occurrence of *blazer*₁ and *vest*₁ is to be excluded because it would imply that *blazer* and *vest* are synonymous.

Second, consider all combinations of two elements from among the set of definitions that refer only to FASTENING. The co-occurrence of *jack*₂ and *vest*₂ has to be excluded because it implies that *jack* is a hyponym of *vest*. The co-occurrence of *colbert*₂ and *blazer*₂ has to be excluded because it implies that *colbert* is a synonym of *blazer*. The co-occurrence of *colbert*₂ and *vest*₂ has to be excluded because it implies that *colbert* is a hyponym of *vest*. And the co-occurrence of *blazer*₂ and *vest*₂ has to be excluded because it implies that *blazer* is a hyponym of *vest*.

Third, consider all combinations of two elements from among the set of definitions that refer to both LENGTH and FASTENING. The co-occurrence of *jack*₃ and *vest*₃ has to be excluded because it implies that *jack* is a hyponym of *vest*. The co-occurrence of *colbert*₃ and *vest*₃ has to be excluded because it implies that *colbert* is a hyponym of *vest*. And the co-occurrence of *blazer*₃ and *vest*₃ has to be excluded because it implies that *blazer* is a hyponym of *vest*.

jack	colbert	blazer	vest
-	1	1	-
2	2	-	-
2	-	2	-
3	3	-	-
-	3	3	-
3	-	3	-

Figure 5. Allowed combinations of classical definitions of *jack*, *colbert*, *blazer*, *vest*.

The alternatives that remain at this point are summarized in fig. 5. It is now immediately obvious that there can be no combination of four classical definitions that respects the existing restrictions, if only because all possible definitions of *vest*_{NL} have already been ruled out. We may conclude, then, that there is no set of classical definitions for *jack*, *colbert*, *blazer*, and *vest* that sufficiently distinguishes the items among each other and that respects the lexical relations that appear to exist among them. Whether this is the dominant situation in the lexicon is difficult to say on the basis of our material; after all, we have only been able to examine a few lexical categories. One general conclusion, at least, is that indeed *not all lexical categories can be classically defined*. In addition, it is worthwhile to point out that the definability issue seems to be strongly influenced by the specific subfield of the field of clothing terminology that is being considered. The 'skirts'-subfields, for instance, contains classically definable categories, whereas the subfield consisting of shirts, blouses, t-shirts, and their likes is as unclassical as the subfield analyzed in the previous pages.

4. Methodological Discussion

What we have tried to illustrate in the foregoing pages (apart from the fundamental fact that non-classical definability is a real phenomenon) is the importance of a rigorous procedure in answering definability questions. Apart from the importance of distinguishing between polysemy and univocality, there are two requirements that discussions of definability should strictly adhere to. First, the generality of classical definitions implies that no disjunctive features are included in the analytical definitions, and second, the distinctiveness of classical definitions implies that they should make the right predictions about the lexical relations among the items involved. As the *jaspe*-subfield shows,

complying with these demands requires a careful, step by step procedure that stands in sharp contrast with two other approaches to the relationship between polysemy and definitionality. In fact, while the approach demonstrated here applies the *classical criterion of definability to denotational data based on non-elicited actual usage*, the two most outspoken recent defenders of monosemy appear to drop either the one or the other of these two features from their methodology.

On the one hand, Ruhl (1989) accepts the importance of usage-based data, but gives up on the necessity of actually defining the presumed single meaning of an item. If all the instances of use of a lexical item are claimed to exhibit the same meaning, the least one should do to make this statement falsifiable is to define the semantic value in question. Ruhl, however, explicitly denies the possibility of doing this. At the end of his analysis of the English verb *bear*, for instance, he writes:

So what does *bear* mean? It should be clear by now that this question cannot be answered in words; there is no single word or phrase that can comprehensively capture exactly what *bear* contributes. I hope, by trying to show the unity of *bear*'s contexts, to have revealed a unified meaning; but such a conclusion is inferential (1989:63).

Clearly, such an approach gives up on precision in favour of impressionism. For general methodological reasons of comparability and falsifiability, such a strategy has to be rejected in favor of the attempt to achieve descriptively adequate definitions. If it is not even possible to definitionally identify the allegedly unitary meaning of a lexeme, how can its unitary status be tested at all? This is not, to be sure, a mere rhetorical question; see Geeraerts (1993) for an overview of other approaches to polysemy apart from the definitional one. Ruhl, however, dismisses the definitional criterion without being explicit about an alternative that is methodologically sound in the sense of being precise enough to allow for falsifiability.

On the other hand, Wierzbicka's approach retains the importance of precise definition, but rejects the denotational, usage-based approach. Such an explicitly introspective strategy runs the risk of being imprecise with regard to the actual range of application of an item. As an illustration, consider Wierzbicka's definition of *dress* (1985:382):

A KIND OF THING MADE BY PEOPLE FOR WOMEN AND GIRLS TO WEAR. IMAGINING THINGS OF THIS KIND PEOPLE COULD SAY THESE THINGS ABOUT THEM:

they are made to be worn on the body, below the head, to cover most of the body

so that all the parts of a woman's body which people think should not normally be seen are covered with that one thing
and to protect most of the body with undesirable contact with the environment
and to cause the woman wearing it to look good

they are made in such a way that when they are on the body the lower half surrounds the lower half of the woman's body from all sides
so that the legs are not separated from one another
and so that the genital area of the woman's body seems to be hidden
and so that women wearing things of this kind look different from men

things of this kind are thought of as something suitable for women to wear in most kinds of places and in most kinds of circumstances.

When we have a look at the actual garments that occur in our database as instances of *jurk* (the Dutch equivalent of *dress*), we find cases in our material that do not conform to the description. If, for instance, 'covering most of the body' is interpreted as 'covering more than 50% of the body', then a number of very short summer dresses with open backs and low necklines do not display the feature in question. And if 'the parts of a woman's body which people think should not normally be seen' include the upper part of the thighs, then dresses with long side slits contradict the image. Furthermore, some dresses have such wide armholes and such a plunging décolletage that they could not normally be worn without exposure of the breasts (unless they are worn with an additional t-shirt or blouse underneath).

The comparison shows, in other words, that the description proposed by Wierzbicka may well be adequate for the majority of cases in the range of *dress*, but does not really cover *all* possible instances. Admittedly, such a comparison is risky for at least two reasons. First, we start from the assumption that English *dress* and Dutch *jurk* are equivalent as far as their referential range of application is concerned. As long as we do not have a similar corpus-based analysis of *dress* as the one we have made for *jurk*, the comparison will have to remain a conditional one. Second (and more importantly), it is not even certain that Wierzbicka actually intends the definition to apply to all the cases in the extension of *dress*. By introducing the phrase 'imagining things of this kind people could say these things about them', the perspective is shifted from the objective features of the things that are being called *dresses* to the subjective image that people say they have about dresses when they are asked for it. In a sense, Wierzbicka defines *dress* by referring to what people think dresses are. And if what people think dresses are only involves the central cases of the category 'dress', then, of course, it makes no sense to complain that the description of this mental image does not apply to non-prototypical dresses: it never intended to do so anyway. On this reading of Wierzbicka's view, its reference to

subjective images could be construed as implying a conscious restriction of the description to the prototypical core of the category. And because introspection probably does work efficiently for retrieving such prototypical images, the introspective method may be salvaged.

It is not quite clear, however, whether this interpretation of Wierzbicka's position is a valid one. On the one hand, she argues that 'a valid definition must be empirically adequate, that is, it must be phrased in such a way that it covers the entire range of use of a given word, expression, or construction' (1989:738). On the other hand, if a definition such as that of *dress* is to be applicable to all things that may be called by that name, people should be able to assert all the characteristics mentioned in the definition any time they see a dress. But surely, when imagining a less prototypical kind of dress than the kind whose features are included in the definition, people will not imagine it as a prototypical case. What people could say about dresses changes, when peripheral members of the category are at stake: default dresses, for instance, may well cover most of the body, but that feature may be suppressed when a fancy type of summer dress is involved.

Even if, however, we accept that Wierzbickian definitions of the kind illustrated above are explicitly restricted to the prototypical core of the categories, a counterargument may be advanced in favor of a method based on observing actual usage. Note that it remains a matter to be settled empirically whether the lexical knowledge that people have in their minds is indeed restricted to a mental image of the core of the category in question. It is not *a priori* given that the idea of a category that people may introspectively retrieve from memory is an adequate reflection of the extent of that person's actual knowledge of the category. On the contrary, if it is part of his knowledge to produce or accept an application of *dress* to non-prototypical cases, then he 'knows' more about the category than would be included in his introspectively retrieved idea of the category. That knowledge, to be sure, is not necessarily conscious knowledge; it is less 'knowledge that (lexical item x may refer to entities with such and such characteristics)' but rather 'knowledge how (lexical item x may be successfully used)'. In order, then, to get a better grasp on the lexical 'knowledge how', usage-based investigations of the type illustrated in this article are vital, precisely if it is suspected that conscious knowledge may only partially cover the full extent of a person's 'knowledge how'.

In short, the approach demonstrated above is inspired by the desire to steer clear both of the danger of theoretical imprecision that is implicit in Ruhl's strategy, and of the danger of empirical incompleteness that is implicit in Wierzbicka's strategy. But if the approach followed here is indeed to be preferred for general methodological reasons, what are the findings that it leads to?

5. Conclusions

If the methodological framework defended in section 4 is accepted, the investigation carried out in section 3 shows that not all lexical items can be classically defined in terms of necessary, jointly sufficient features. If classical definability is considered a criterion for monosemy, this conclusion further implies that not all lexical items are monosemous. At the same time, however, the investigation suggests that classical definability is not necessarily a psychologically acceptable criterion for monosemy. The items whose definitionally polysemous nature was determined in section 3 are not ones that are intuitively recognized as polysemous. In this sense, the investigation supports and further illustrates the point made in Geeraerts (1987) and (1993): the different criteria for polysemy that are quite plausible taken by themselves may be mutually contradictory; specifically, *vest* etc. are definitionally polysemous, but not intuitively. This implies, in other words, that *lexical semanticists cannot at the same time maintain the monosemic bias and the ideal of classical definability*. If, on the basis of the monosemic bias, it is accepted that *vest*'s intuitive univocality is a theoretically viable reflection of an actual monosemy, the ideal that an individual meaning can always be classically defined has to be relaxed (because there is no classical definition for *vest* in the usage under investigation). Conversely, if one sticks to the idea that classical definability is an integral part of what it is to be a distinct meaning, the monosemic bias will have to be relaxed to the point where even an intuitively unsuspect case of univocality like *vest* is accepted to be polysemous.

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