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POLYSEMY

Introduction

The aspect of polysemy which I wish to address in this paper
concerns the issue of how working lexicographers divide lexical
items or words into different, usually, numbered, meanings. It is
not infrequently stated that lexicographers are somewhat shy
of explaining their own techniques - or are perhaps too busy
to do so - or even that they are unaware of what they are doing,
working from some intuition that cannot be stated. The most recent
discussion that I am aware of on the subject of sense division
is that by John Ayto (1983). In his paper Ayto gives an account
of one accepted working method.[1]

His argument is as follows: firstly the lexicographer should
consider the superordinates of each of the meanings of the lexical
item (that is, the appropriate genus word which will be selected
on which to base an analytic definition). This is, so to speak,
the first sifting process: where meanings require quite distinct
genus words they are ipso facto different senses. If one meaning
of fly has the general superordinate term 'move through the air'
and one has the superordinate 'an insect', then they are clearly
different senses of fly. Distinct superordinates or genus words
suggest distinct senses. The second move is to disambiguate those
meanings which have the same superordinate. Ayto uses cup as
an example, in which several meanings may have definitions which
begin with the same genus word: 'vessel'. These are two or three
differently described vessels for drinking liquids from, and
the sports trophy. The second sifting process takes place when
the lexicographer considers the various differentiae that will
be required in a definition to distinguish these meanings from
each other such that, for example, the sports trophy has a differ-
ent function from other cups, is differently shaped, and so on.
Considerations of shape, size, the material used in construction,
etc., are used to disambiguate two further meanings, which are
roughly speaking (1) a bowl-shaped vessel with a handle typically
presented to the drinker with a saucer, and (2) a straight-sided
vessel usually made from plastic and typically presented to the
drinker from a vending machine.

Clearly the problem that arises here is that of knowing when
to stop eliciting differentiae which individuate different in-
stances of the object in question. Is a separate sense needed
for green cups, one for blue, etc? At this stage the lexicographer
should consider the near-synonyms of the word in question. The
extent to which he or she must consider the individual features
of particular instances of things called cups is precisely the
extent to which they cease to be called cups and become instead
mugs or glasses. The lexicographer is required only to posit
sufficient differentiae to distinguish cup from mug and glass
and then to review those features which still present distinctly
separate types of cup and divide them into senses accordingly.

After a theoretical model of sense division has been achieved, a practical decision can be made about how many senses there are actually room for in the dictionary, and if space constraints are powerful the lexicographer can, as it were, climb back up the ladder towards ambiguity again until a satisfactory number of definitions can be established which cover the main meanings of the word.

Ayto puts this model forward not as the sole answer to a lexicographer's needs but as one basic tool of sense division: a strict semantic analysis which provides an initial theoretical basis on which lexicographers can work, using their judgment as to how best to present the information at their disposal to meet the dictionary's user's needs. This analysis of how meaning can be disambiguated is clear, neat, and not a hundred miles removed from the working practices of large numbers of lexicographers.

Yet it seems to me that as a theoretical model it is insufficiently detached. For in order to obtain the appropriate superordinates for related senses of a word the lexicographer must, first, have already distinguished the senses in his or her mind, and second, have decided at what level of superordination the genus word will be chosen. Further, although the model seems to work very satisfactorily with respect to concrete nouns referring to fairly common objects in the real world, it is not at all clear that it would be so satisfactory with words which are more abstract, for example <u>degree</u> or <u>culture</u>, or with words which are highly polysemous such as <u>do</u> or <u>say</u>, or with words of other word classes than noun or verb. So there are two problems which arise with this technique. First, it does not free lexicographers from the charge of working purely from some mysterious intuition, in a state of circular subjectivity. Second, it does not have sufficiently wide applicability.

I should like to put forward the basis, at least, of an alternative model. This model has been derived from the experiences of lexicographers at the University of Birmingham, who are working with a large body of recorded instances of uses of words in the language. For the purposes of lexicological research the material has been concordanced so that we are examining a number of instances of the use of a word with what can fairly be described as 'minimal context' (see Figure 1).

What is immediately striking about working with citation material in this form is that a surprising number of concordanced instances of words are quite unambiguous. Lexicographers are able to read through a large number of usages and determine distinct senses in a significant proportion of cases. This was, to me, quite unexpected. I became interested in considering what it was in the minimal contexts available that enabled lexicographers to decide without apparent trouble which meaning of a polysemous word was being used, or, alternatively, what techniques we were using to make such a decision. At the same time I became interested in the difference between such cases and cases which were baffling, or at least perplexing. I shall look at the former case first.

2 delineation

s and values. the elaboration of negritude, the delineation and celebration of a distinctively
ied, too, to catholic social philosophy) ; the delineation of a discinct "african personality"

2 delinquency

ir fathers and the love they could have given, delinquency is often blamed on the fact that mor
are taken into care, sometimes because of their delinquency, or often because their parerts beco

8 delinquent

m locked up until he's twenty-one as a juvenile delinquent. and he can, that's four years. and d
re regularly unemployed in later life, are more delinquent, and might become poor parents them-
one parent show greater signs of disturbed or delinquent behaviour, are less likely to do well
ing to de- pendent, neglected, incorrigible and delinquent children. while i stand gripping the
lishment in which he is treated as if he were a delinquent child. the whip may be cruel compare
nder monique, as she was for a minute or two: a delinquent nymphet shining through the matter-of
dren tend to be more rebellious, aggressive and delinquent than the moral, conforming pupils in
e time, boys may run a greater risk of becoming delinquent. the case for more equal relationship

1 delions

where i happily belched and laboured. the dan- delions perished. a reek of sap mingled with the

1 deliquescent

sh- moo, what with little dictionaries; candle; deliquescent rock salt figure from salt mine whi

5 delirious

treasures to mary.... no doubt, i was a little delirious - and on the following day i was still
that with all blocks removed and a prospect of delirious and unlimited delights before me, i wo
her hair, and we gently kissed. her kiss, to my delirious embarrassment, had some rather comical
at her tennis game produced in me - the teasing delirious feeling of teetering on the very brink
ir geoffrey harmsworth attributed northcliffe's delirious mental state in the last months solely

1 delirium

ermere feared became a reality. long before his delirium northcliffe was pursued by the daemons

15 deliver

lasses and had attempted to get me over once to deliver a lecture. i had no intention of doing
g. knowing she was coming, watching her come to deliver herself in curiosity and lust, knowing w
ial place. then i heard the old-timer cough and deliver himself of some sepulchral mucus. i left
hen put the dress down. 'how come he got you to deliver it?' she asked rudolph. 'i happened to m
icated the little overnight bag. 'i was asked to deliver it to you. 'what is it?' gretchen asked
power of luck the sense of magical forces which deliver omens in commonplace encounters; this be
i see,' boylan said. 'i suppose somebody has to deliver rolls.' he laughed. 'you just don't seem
nyone do up at five o'clock in the morning? 'i deliver rolls on a bicycle for my father.' rudol
five o'clock in the morning, rain or shine, to deliver rolls to the depot hotel and the ace din
had to get up at five o'clock every morning to deliver the bread in the cart attached to a bicy
big commercial bakery stopped every morning to deliver the cakes and pastries and axel confined
oblems had totally failed. where democracy does deliver the goods, in africa, or elsewhere, the
e of hypocrisy as well. finally, its failure to deliver the goods made it appear increasingly ir
that,' said my mother, and turned toward me to deliver the message with full force (i said she
he end of my name. and i did not like having to deliver x amount of achievement every single ter

5 deliverance

ng planks on their heads in relief at britain's deliverance, all displays being funded by the ar
ky that it seemed to promise hope, and possibly deliverance, for the most unhappy of the world's
e lion's den again, with no guarantee of divine deliverance. his tormentor's next and final cove
catch in a door that would ensure his physical deliverance. rothermere's daemons were more tang
virtue, loses the power of flight which is its deliverance; there is no longer anything to rais

28 delivered

's best under- graduate speech, and excellently delivered." after a year at university benn join

Figure 1

Clearly distinguishable meanings

   It would be my contention that language users do not generally
speak or write ambiguously, where ambiguity depends upon confusion
of meanings in a polysemous words. People misunderstand each
other, but rarely because they cannot distinguish between different
meanings of individual words. The fact that we can make and
recognize puns successfully depends on such a state of affairs.
The use, by linguists, of the word bank as an example to dem-
onstrate ambiguity in word meaning would strike many non-linguists
as curious. People do not, outside linguistics texts, confuse
the senses of 'a place to deposit money' and 'one side of a river'.
It must be rare indeed that the situation arises in which "I'm
just going to the bank" means "I'm just going to the river bank".

   Given that it is the case that sufficient distinction between
the meanings of polysemous words is made, somehow, for communica-
tion between language users to be successful, the obvious point
to consider is that in the case of normal discourse disambiguation
is effected by the context of the discourse and the specific
situation of the speakers and hearers involved. However, the
experience of lexicographers working at Birmingham shows that it
is, in fact, possible to disambiguate meanings from written
material with minimal, and purely linguistic, context. Furthermore,
with reference to the bank example mentioned above, I should go
so far as to suggest that "I'm just going to the bank" means
unambiguously "I'm just going to Lloyds/ the NatWest/Coutts"
or what you will. There would normally be some onus on a speaker
or writer to clarify that, in a given situation, "I'm just going
to the bank" refers to a river bank. The language user has to
make it clear which sense of a polysemous word is being used
at any one time.

   What techniques are available for language users to do this?
It is clear that, in a large number of cases when working from
concordanced citational material, an examination, sometimes even
a fairly cursory examination, of the syntactic and collocational
patterns in the environment of the node word (the word under
analysis), clarifies which meaning is being used (cf. Jones and
Sinclair 1974).

   I would therefore like to suggest the following procedures
for distinguishing clear-cut cases of different senses for a
dictionary headword. (These procedures have been numbered but
are not to be taken as necessarily proceeding in the order given.)

   Procedure 1 constitutes an analysis of the syntactic behaviour
of each instance of the word in use. The broadest and most obvious
move is to distinguish word classes. But of great interest also
are the syntactic structures or patterns in which the word
functions. In the following two examples of operate:

   (1)   Human beings will simply be unable to operate them.

   (2)   They operated but it was too late.

the example using the transitive verb in (1) must mean 'to control
and run' something, say machinery, and the example using the

intransitive verb in (2) must mean 'to wield a knife in order to effect internal repairs on animate bodies'.

The following extracts featuring the noun <u>bite</u> are taken from the Birmingham corpus:

1.   We teach the youngsters to develop competitive bite.
2.   ... gives each of them a quick bite to immobilize them.
3.   The crude Italian Rosso could not compare for bite with the Algerian Pinard that sloshes ...
4.   ... their bites leave itching red spots on the skin.
5.   It seems indifferent to insect bites.
6.   ... knees wide apart, in a clump of water mint. 'A bite! A bite! You've got a bite.'
7.   Madeleine took a bite. 'It is delicious' she agreed.
8.   And dinner was the last bite you had tonight?
9.   I'm allergic to dog bites.
10.   Brody was in the midst of swallowing a bite of egg salad sandwich.
11.   Meadows took a bite of meat, chewed it, savoured it...
12.   ...he barely tasted the four bites he managed to wrest away for himself.
13.   Young Lionel lacked bite and grasp.
14.   ...had been walking fast too for the bite of the cold air...

Immediately one notices the clear distinction between the 'count' and the 'uncount' senses. The lexicographer will want to distinguish "competitive bite", "the bite of Italian Rosso" and young Lionel's inadequacies from the insect bites, dog bites, and the egg salad sandwich. Thus even the broadest syntactic analysis can be useful in disambiguating meanings.

<u>Procedure 2</u> consists of reviewing the data in the light of collocational patterns and the general co-occurrence of lexical items in different semantic areas. Returning to the examples of <u>bite</u> above, one would want to say that the examples of the countable noun cover more than one meaning of <u>bite</u>. Consideration of the lexical items in the immediate environment of the node word, however, immediately show broad groups. Examples 2 and 4 discuss the effects of biting: immobilizing the victim or leaving itching spots; we can infer snakes and insects. Examples 5 and 9 are premodified by the giver of the bites, <u>insect</u> and <u>dog</u>, and in these cases <u>bite</u> means 'wound' of some kind. Examples 7, 10, 11 and 12 have the lexical items <u>delicious</u>, <u>swallow</u>, <u>sandwich</u>, <u>meat</u>, <u>chew</u>, <u>taste</u> - all to do with <u>food</u>, the consumption of food, the savouring of food. These cases have the synonym 'mouthful'.

The above two procedures can be used as primary tools for disambiguating senses with minimal contextual evidence. They are useful in working from concordanced material in which the level of syntactic and collocational patterning thus far discussed is largely accessible within a few words each side of the node word.

However, the account of these procedures given is somewhat crude and is intended to be only a general outline of methods which need considerable further refinement. In particular the

combination of a syntactic and collocational approach is one which suggests promising avenues for further research. Example 6 of bite above illustrates this point. The four words Madeleine took a bite followed by a full-stop, when taken alone, are sufficient to give the meaning 'mouthful'. The word take regularly co-occurs in collocation with bite, although the collocation is not restricted to the sense of bite which has the synonym 'mouthful'. Madeleine does not regularly so co-occur. In this case a combination of the syntactic structure (subject, predicate, nominal group, without a following adjunct), the collocational pattern which lexically realizes the predicate and nominal group (took a bite) and the fact that the subject is human (Madeleine) are sufficient context to provide the necessary clues to meaning. Further analysis along these lines, which are based on Firth's notion of colligation (cf. Palmer 1968), should take account of the habitual patterns in grammatical categories in relation to a word, in addition to the actual lexical realizations of the categories in these patterns.

Procedure 3 consists of dealing with citations which can be given more than one reading. These present no lexicographic problems. The lexicographer merely has to perform the linguistic counterpart of the visual trick where a vase can be seen as two profiles or vice versa. That is, the lexicographer has to define the meaning of the word in each of its readings. This last procedure is thus a kind of mopping-up operation for those senses which can be clearly distinguished.

I should now like to turn to some more baffling cases.

Meanings which are not clearly distinguishable

I have proceeded thus far without questioning various premises which tend to be accepted by working lexicographers. One of these is that there are such things as distinct and distinguishable senses of polysemous words which can be clearly defined and which are, as it were, separable from each other in terms of dictionary presentation. This premise is questioned by Professor Roy Harris in an article (1982) in which he reviewed the latest published Supplement to the OXFORD ENGLISH DICTIONARY (OED). He describes OED lexicography as 'black and white' lexicography for a number of reasons. One of them is the following:

> It (that is OED lexicography) takes for granted the validity
> of the assumption that the many varying shades of semantic
> grey which in practice language presents us with can without
> distortion be reduced to a clearly determinate number of
> verbal meanings. This assumption was accepted without question
> by the philologists of Murray's generation. It no longer
> is today. But it is an assumption very necessary to the whole
> enterprise of presenting the vocabulary of a language as
> a list of separate items, each with a fixed set of possible
> interpretations. Is that in practice how language works?
> Anyone who reflects carefully upon his own speech for a while
> without prejudging the issue will quickly come to doubt whether
> it is, unless he has become so brainwashed by a dictionary-
> based education that he literally cannot conceive that words
> could be anything else than what they are represented as

being in dictionaries.

I have already argued, of course, that there are, in fact, cases where different senses can be disinterred from a mass of citational material, complete with moderately clear boundaries, and which are susceptible to definition of the analytic kind. However, not all citational evidence can be clearly disambiguated in terms of lexicographic senses. In some cases the meanings blur into each other or are otherwise indistinct from each other. Yet the lexicographer must, given the existing methods of presenting dictionary information, make some sort of job of sorting them out into different meanings, normally numbered meanings. There are two different types of blurring between senses. One is the case of figurative or metaphorical extensions of literal senses. My proposed procedures are simply no use for handling distinctions of meaning in this area, since it would seem that figurative extensions typically take the same syntactic and collocational environments as the literal senses from which they are derived.

The second type of blurring is where a word seems either to operate on a cline between two or more meanings, or to bring in its train various extra nuances so that any individual utterance might suggest one strong aspect of a meaning but is, as it were, strengthened or supported by various other possible close meanings.

Given below are a number of examples of the word <u>culture</u>.

1. ...as one person of culture to another...
2. There does seem evidence that Eastern cultures have more right brain emphasis.
3. ...a multicultural society where cultures can live side by side.
4. Blood cultures were done because of the possibility of...
5. You're a person of international culture.
6. ...desire to live as a nation that has its own culture and individuality.
7. ...by removing all traces of black ethics and culture.
8. ...the Ministry of Culture.
9. Man dresses the part his culture tells him he is called upon to play.
10. Newspaper-reading, word-and-trade-conscious urban culture.
11. ...nevertheless absorbed enough of Spanish political culture to build authoritarian principles...
12. ...to give value and literate dress to an oral culture we have forgotten how to appreciate.
13. ...the great cultures of Japan and China.
14. I have shown how Caro's work belongs to the culture of the early 1960's.
15. ...the big colloquium on African culture and African civilization that's to be held...
16. ...has led to the development of a specific 'pop' culture.
17. ...the culture of machismo.
18. ...culture shock.

19. Infanticide was practised by many early cultures.
20. One of his assistants was careless about a culture
     of chicken cholera germs...
21. ...the extension of the throw-away culture.
22. ...traceable local accents and a person of genuine
     culture wouldn't find all that much difference.

Two of these, Examples 4 and 20, can be separated from the others using my proposed procedures. They have no semantic link with the rest of the examples. The lexicographer can whip these out straight away and deal with this meaning in the style appropriate to the dictionary he or she is working on.

The remaining twenty examples suggest three or four general semantic areas. Some are in the general area of the arts, and perhaps include a dash of the notion that the arts appeal to the sophisticated. Some relate to something like a society or a civilization - something which is either broader or narrower than these terms, or perhaps both, e.g. Example 2. A few suggest the notion of a shared heritage or tradition in a group. Finally there are a group in which the term is used to pick out a section of society which is being identified, perhaps temporarily, by some feature of the lifestyle of its members, e.g. Example 21.

This, I think, accounts for the broad range of semantic areas which should be covered by a dictionary. Yet I have elicited four semantic areas which do not correlate with the semantic areas offered in either the COLLINS ENGLISH DICTIONARY (CED) or in the LONGMAN DICTIONARY OF CONTEMPORARY ENGLISH (LDOCE). Neither do the definitions in these dictionaries suggest that the meanings have been analyzed in exactly the same way in each (see entries E_1 and E_2 below).

E_1: **cul·ture** ('kʌltʃə) *n* 1. the total of the inherited ideas, beliefs, values, and knowledge, which constitute the shared bases of social action. 2. the total range of activities and ideas of a group of people with shared traditions, which are transmitted and reinforced by members of the group: *the Mayan culture.* 3. a particular civilization at a particular period. 4. the artistic and social pursuits, expression, and tastes valued by a society or class, as in the arts, manners, dress, etc. 5. the enlighten- ment or refinement resulting from these pursuits. 6. the cultivation of plants, esp. by scientific methods designed to improve stock or to produce new ones. 7. *Stockbreeding.* the rearing and breeding of animals, esp. with a view to improving the strain. 8. the act or practice of tilling or cultivating the soil. 9. *Biology.* a. the experimental growth of microorganisms, such as bacteria and fungi, in a nutrient substance (see **culture medium**), usually under controlled conditions. b. a group of microorganisms grown in this way. ~ *vb.* (*tr.*) 10. to cultivate (plants or animals). 11. to grow (microorganisms) in a culture medium. [C15: from Old French, from Latin *cultūra* a cultivating, from *colere* to till; see CULT] —'**cul·tur·ist** *n.* —'**cul·ture·less** *adj.*

E_2 :   **cul·ture** /'kʌltʃə'/ *n* **1** [U] artistic and other activity of the mind and the works produced by this: *The aim of our library service is to bring culture to the people* **2** [U] a state of high development in art and thought existing in a society and represented at various levels in its members: *the development of culture|a man of little culture* **3** [C;U] the particular system of art, thought, and customs of a society; the arts, customs, beliefs, and all the other products of human thought made by a people at a particular time: *ancient Greek culture|a tribal culture, never studied before* **4** [U] development and improvement of the mind or body by education or training **5** [U] the practice of raising animals and growing plants or crops· *bee culture|The culture of this uncommon flower is increasing in Britain* **6** [C. U] (a group of bacteria produced by) the practice of growing bacteria for scientific use or use in medicine

It is precisely the lack of clarity in our use of the word culture which makes it such a handy word to have at one's disposal. It offers, as it were, semantic extras just because in most uses its possible meanings are not clearly disambiguated. We use it in a rather 'vague' way. What can the dictionary maker do to reflect this state of affairs? CED's and LDOCE's entries E_1 and E_2 demonstrate one thing very clearly. They do not, cannot by their very structure, show that there is slippage between some of the senses that they give but not between others.

The convention of giving analytic definitions which detail the boundaries of word meaning for any one sense is perhaps a hindrance rather than an aid in showing where senses merge. It may be worthwhile to consider alternatives to the conventional structure of dictionary entries for some words and expressions. For example, an entry which looked more like a thesaurus extract with strings of related near-synonyms but well supported by citational exemplification, or a short statement about the variety of usages of one word, might be preferable in indicating a range of meaning. However, such styles may present too many problems to the dictionary maker who has, still, to conform to the constraints of the page and present meanings linearly. Yet with words such as culture, even if definitions resembling analytic ones are used, it would be more realistic were the genus word and some differentiae directed toward the centre of a semantic area, rather than attempting to cover its blurred boundaries. In this case the question then arises: how to show the dictionary user that there is a functional difference between two types of definition which apparently operate identically?

There is nothing in the LDOCE entry E_2 for culture to show that there is a complete break in meaning between definition Numbers 4 and 5, but no such break between 1 and 2. The CED entry E_1 has interposed a label after their definition Number 9 which has the effect of orientating the reader to a new semantic area, but this kind of technique is by lexicographic convention only used for senses which fall within technical subjects or fields.

The convention of sub-sense numbering (1, 1a, 1a(i) etc.) has been used before in dictionaries, notably the OED, the WEBSTER

dictionaries, and the LONGMAN NEW UNIVERSAL DICTIONARY. All these
dictionaries follow a broadly etymological or historical sense
ordering pattern.[2] With the advent of synchronically orientated
dictionaries, however, the notion of the sub-sense might profitably
be released from its diachronic bonds and be used to convey range
in meaning and the idea of the semantic cline. For example,
definitions numbered 1; 1a; 1b; 1c; 2, could be used to convey
the information that there are three senses being presented which
shade into each other, all under the heading (1), with (2) a
separate sense, not blurring in syntactic, collocational or
colligational patterning with any of the meanings covered under
(1).

Conclusion

In conclusion I should like to suggest that it is now necessary
for lexicographers to reconsider the ways in which they analyze
meanings and the ways in which they present their analyses. It
seems to me, firstly, that Ayto's account of distinguishing the
senses of polysemous words is too partial since it cannot handle
satisfactorily a very large number of these words. Secondly,
Professor Harris is right, in general terms, to criticize lexi-
cographers for fudging the issue of meaning clines, but he does
not, apparently, accept the case that some meanings of polysemous
words can be clearly isolated and defined, and he fails to offer
any positive suggestions for alternative methods of defining
or describing words which have blurring between senses. I hope
that I have been able to offer a method which can be used to
determine isolable meanings of polysemous words and, further,
some suggestions for presenting meanings in such a way as to
show the "many varying shades of semantic grey which in practice
language presents us with ... without distortion", or at least
with less distortion.

Notes

[1]
   On 'sense division' in the English dictionary and 'meaning
   discrimination' in the bilingual dictionary, cf. the papers by
   Doležal in Part I and Kromann et al. in Part II of this volume.

[2]
   On conventions and ordering, cf. the papers by Ilson and Kipfer
   in Part I of this volume.

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