

REFERENCE DETAILS

Goddard, Cliff. 2002. The search for the shared semantic core of all languages. In Cliff Goddard and Anna Wierzbicka (eds). *Meaning and Universal Grammar - Theory and Empirical Findings. Volume I*. Amsterdam: John Benjamins. pp. 5-40.

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The Search for the Shared Semantic Core of All Languages

Cliff Goddard

University of New England, Australia

1.0 Introduction

Every theory starts with certain assumptions. The initial assumption of the natural semantic metalanguage theory is that the meanings expressible in any language can be adequately described within the resources of that language, i.e. that any natural language is adequate as its own semantic metalanguage.

The theory began as a method of lexical semantic analysis based on reductive paraphrase; that is, on the idea that the meaning of any semantically complex word can be explicated by means of an exact paraphrase composed of simpler, more intelligible words than the original (Wierzbicka 1972). The reductive paraphrase method enables one to avoid getting tangled up in circularity and terminological obscurity, two problems which dog most other semantic methods. Simplicity and clarity are the watchwords, and to this end no technical terms, neologisms, logical symbols, or abbreviations are allowed in reductive paraphrase explications – only plain words from ordinary natural language.

If it is possible to do semantic analysis using reductive paraphrase and at the same time avoid circularity, then it follows that every natural language must contain a non-arbitrary and irreducible semantic core which would be left after all the decomposable expressions had been dealt with. This semantic core must have a language-like structure, with a lexicon of indefinable expressions (semantic primes) and a grammar, i.e. some principles governing how the lexical elements can be combined. The semantic primes and their principles of combination would constitute a kind of mini-language with the same expressive power as a full natural language; hence the term “natural semantic metalanguage”.

The assumption of the “meta-semantic adequacy” of natural languages can of course be questioned or disputed. But if it is valid, it would have very important consequences for linguistics, and so it deserves to be taken seriously. The

appropriate procedure is to try to make the assumption work for us and see how far we can go with it. In other words, we should try to build a system of semantic representation based on natural language, and see what happens. Will we encounter insuperable difficulties or will we achieve powerful descriptive and explanatory outcomes? Or perhaps the venture will work out well in some respects and not so well in others; there is no reason to assume *a priori* that it is an all or nothing affair.

If languages all have irreducible semantic cores, how do we find them? Presumably by experimentation; i.e. by an extensive program of trial and error attempts to explicate meanings of diverse types, aiming always to reduce the terms of the explications to the smallest and most versatile set. This is exactly what Anna Wierzbicka has done over a period of thirty years (and continues to do), in conjunction with a growing community of NSM scholarship. The set of 60 or so semantic primes, i.e. indefinable meanings, which Wierzbicka (1996) has proposed in *Semantics: Primes and Universals* are the fruit of that program of research, which, it must be stressed, is not yet regarded as complete.

When Wierzbicka and colleagues claim that DO, BECAUSE, and GOOD, for example, are semantic primes, the claim is that the meanings of these words are essential for explicating the meanings of numerous other words and grammatical constructions, and that they cannot themselves be explicated in a non-circular fashion. The same applies to other examples of semantic primes such as: I, YOU, SOMEONE, SOMETHING, THIS, HAPPEN, MOVE, KNOW, THINK, WANT, SAY, WHERE, WHEN, NOT, MAYBE, LIKE, KIND OF, PART OF. Notice that all these terms identify simple and intuitively intelligible meanings which are grounded in ordinary linguistic experience. This fact has important consequences.

For many linguists and logicians working in other frameworks, nothing is more mysterious and intangible than meaning. But adopting reductive paraphrase as a way of grasping and stating meanings makes meanings concrete, tangible. Above all, it makes statements about meanings testable – because explications couched in natural language can be directly or indirectly substituted in place of the expressions they are intended to represent, and so can be submitted to the test of substitution *salvo sensu*. It all depends on the fact that explications in ordinary language are intelligible to native speakers.

The NSM approach has proved to be an extremely productive one. There have been literally hundreds of descriptive empirical studies carried out within the framework – into aspects of lexical, grammatical and illocutionary semantics, into cultural pragmatics, and, more recently, into aspects of universal grammar and typology. This work will be briefly reviewed later; for the moment it is simply mentioned that a wide spread of languages is involved aside from English,

including: Arrernte, Chinese, Ewe, French, German, Italian, Japanese, Lao, Malay, Mangaaba-Mbula, Maori, Polish, Russian, Spanish, and Yankunytjatjara.

Using the NSM approach it has repeatedly proved possible to defy the skeptics and to “define the indefinable”, i.e. to explicate semantic nuances which have been claimed to be either impossible or excruciatingly difficult to describe. A couple of examples will help. Chomsky (1987:21) remarks: “Anyone who has attempted to define a word precisely knows that this is an extremely difficult matter, involving intricate and complex properties. Ordinary dictionary definitions do not come close to characterising the meaning of words.” To illustrate this point, one of Chomsky’s examples is the visual vocabulary: words such as *watch*, *glare*, *gaze*, *scrutinise*, etc. It is, of course, unclear how Chomsky himself would go about explicating the meanings of these – or any other – words, since his own proposals about meaning have been sketchy at best.

The meanings of language-specific “visual” words are not difficult to explicate, however, within a reductive paraphrase framework. To give single example (cf. Wierzbicka 1996:251-253; Goddard 1998):

- (1) X was *watching* Y =
 for some time X was doing something
 because X thought:
 when something happens in this place
 I want to see it
 because X was doing this, X could see Y during this time

For Chomsky’s equally anti-semantic predecessor, Leonard Bloomfield, the standard examples of words whose meanings could not be defined precisely were emotion terms: “we have no precise way of defining words like *love* and *hate*, which concern situations which have not been accurately classified” (1933:139). There is, however, an extensive body of descriptive semantics of emotion terminology (cf. Wierzbicka 1999). Again, to give just a single example:

- (2) X felt *envious* =
 X felt something bad
 because X thought like this about someone else:
 something good happened to this person
 it didn’t happen to me
 this is bad
 I want things like this to happen to me

As a final example, we can consider a word from the family of causative verbs. *Break* (trans.) is often defined simply (and simplistically) as ‘cause to break (intr.)’. The NSM explication below (for one meaning, perhaps the most central meaning, of *break*) is more elaborate, but considerably more explanatory (cf. Goddard 1998):

- (3) Person-X *broke* Y (e.g. Pete broke the window) =
 X did something to Y
 because of this, something happened to Y at this time
 because of this, after this Y was not one thing any more

These explications should underscore the point that although the NSM approach can be seen as a classical approach to semantics in some respects, especially in its commitment to semantic description in discrete propositional terms, it is quite unlike other so-called classical approaches to semantics. First, NSM explications are not lists of necessary and necessary conditions, or bundles of semantic features. They are essentially texts composed in a specified minimal subset of ordinary language. Second, the NSM approach is not linked in any way with so-called “objectivism”, i.e., the view that linguistic expressions get their meaning from correspondences with aspects of an objective, language-independent reality. On the contrary, the proposed NSM metalanguage contains sundry elements which are inherently subjective, vague, and evaluational (such as, for example, *LIKE* and *GOOD*). Third, as can be seen from the examples above, it is entirely possible to incorporate conceptual prototypes, scenarios, and so on, within NSM explications.

Up to this point, the exposition has stayed within the realm of one language, namely English. This is not surprising, nor is it necessarily disturbing. English is a language that all readers of this book can be presumed to have a good working knowledge of, and it is the most intensively described of all the world’s languages. If any method of semantic description is to pass muster it has to be able to come to grips with semantic description of English. But what about other languages? It is a truism of linguistics – and rightly so – that languages should be described in their own terms, and that one should avoid projecting or imposing the categories of one’s native language upon other languages. Where does this leave the project of developing a method of semantic description based on natural language?

Let us go back to basics. The starting assumption is that any natural language is adequate as its own semantic metalanguage. Hence it follows that just as there is an irreducible semantic core of the English language, there is an irreducible semantic core at the heart of any natural language; that is, just as there are

thousands of natural languages, there thousands of natural semantic metalanguages. Extensive language-internal semantic analysis in Polish, Yankunytjatjara, or Lao (for example), would in due course unearth a non-arbitrary set of indefinable Polish, Yankunytjatjara, or Lao words – the semantic primes of that language. In tandem with this discovery, one would also discover the essential (i.e. irreducible) grammar which governs how the primes can be combined in that language.

If we had various independently established natural semantic metalanguages, we could then compare them and establish, on a purely inductive basis, in what respects they were similar and in what respects they were different. Obviously there would be differences – because Polish, Yankunytjatjara, and Lao are different languages. Not only would we expect the forms of the semantic primes to be different, we would expect various language-specific grammatical rules to be different (e.g. word order, rules of agreement, and inflection). But how extensive would the similarities be? To what extent would it be possible, for example, to match up the meanings embodied in the English primes with those of Polish, Yankunytjatjara, and Lao? To what extent would the combinatorial patterns of the English metalanguage have analogues in the metalanguages of other languages?

These questions have been of pressing concern to Wierzbicka and her colleagues in the NSM framework since the late 1980s. At root, the fundamental issue is that of universality: the same issue which dominates mainstream discussions of syntax and phonology. As in other areas of linguistics, NSM semantics has adopted – and sought to test – the hypothesis that there is substantial universality in both the lexicon and the grammar of semantic metalanguage. As mentioned, the ideal position from which to bear on the issue would be to begin with a body of deep semantic analyses carried out on a purely language-internal basis in a range of diverse languages. But we do not have such work. There have been many valuable explorations of particular semantic problems and domains in non-English languages, but (so far) there has been no broad and thorough working through of the process of lexical decomposition right down to level of putative semantic primes. Given the amount of intellectual time and energy needed to conduct such investigations they are unlikely to be forthcoming, in any numbers, in the immediate future.

Does this mean we are stymied? No, it doesn't. The viability of the universality hypothesis can still be tested, to some extent, by a more limited procedure, which consists of taking the concrete proposals about semantic primes and their combinatorial properties which have been derived from in-depth analysis of English and other European languages, and testing their viability in a set of diverse languages. For example, checking whether there are words for DO,

for GOOD, for BECAUSE, and so on, in a wide variety of languages; and, if the answer is yes, checking whether these words have the predicted combinatorial properties. The first extensive collection of such studies (Goddard and Wierzbicka Eds 1994) was published as *Semantic and Lexical Universals – Theory and Empirical Findings* (henceforth: SLU). It focused mainly on the identity of the semantic primes, rather than on their grammar, and it dealt with only 39 of the current inventory. Despite these limitations, it was a substantial enterprise and a worthwhile exploration of the viability of the NSM hypothesis.

The sample of languages was typologically and genetically diverse, containing only one European language (French). The languages (and authors) involved were as follows: Acehnese (Mark Durie, Bukhari Daud and Maward Hasan), Arrernte (Jean Harkins and David Wilkins), Ewe (Felix Ameka), French (Bert Peeters), Japanese (Masayuki Onishi), Kalam (Andrew Pawley), Kayardild (Nicholas Evans), Longgu (Deborah Hill), Mandarin Chinese (Hilary Chappell), Mangap-Mbula (Robert Bugenhagen), three Misumalpan languages (Kenneth Hale), Samoan (Ulrike Mosel), Thai (Anthony Diller), Yankunytjatjara (Cliff Goddard). Unless otherwise indicated, any data about these languages adduced in this chapter comes from these papers.

The results of the SLU studies were overwhelmingly positive. Almost all the proposed semantic primes turned out to have identifiable exponents in almost all the languages. Certainly there were some difficult areas in some languages, and some interesting analytical issues arose (see next section); but overall, the hypothesis that the proposed NSM primes have viable exponents in all languages was substantially borne out.

The next exploration, *Studies in the Syntax of Universal Semantic Primitives* (Goddard Ed 1997), was focused specifically on the combinatorial properties of semantic primes. Topics included the grammar of mental predicates in Hawaii Creole English (Ryo Stanwood) and Japanese (Masayuki Onishi), the grammar of spatial relations in Longgu (Deborah Hill and Cliff Goddard), the grammar of time and space in French (Bert Peeters) and Cantonese (Malindy Tong *et al.*), and the status of conditionals and counterfactuals in Japanese (Rie Hasada). As one might expect, the exercise revealed a couple of areas which needed rethinking, but overall the results were, once again, extremely encouraging. Recent notable studies include Ryo Stanwood's (1999) thorough text-based study of semantic primes and their grammar in Hawaii Creole English, Emily Knight (forthcoming:Ch.9) on Bunuba, Marie-Odile Junker on Cree, and Tonya Stebbins (forthcoming) on Sm'algyax (Tsimshian), the latter three languages being polysynthetic.

But none of these studies was a comprehensive study of the full current set of NSM hypotheses – both lexical and combinatorial. To do this is the main goal of

the present collection of studies. The sample of six languages (Lao, Malay, Mandarin Chinese, Mangaaba-Mbula, Polish, Spanish) encompasses languages of diverse types (isolating, agglutinative, inflectional) and language families (Tai, Austronesian, Sinitic, Indo-European). For each language, the authors have undertaken to locate the best candidates for every one of the current inventory of primes, and to report on how the hypotheses about their combinatorial properties fare. Essentially, these descriptive studies report on whether the model natural semantic metalanguage outlined in Wierzbicka (1996) is a viable model for these diverse languages.

Table 1.1 (next page) lists significant NSM studies of non-English languages, including those contained in the present two-volume set. A location map can be found at page xvi. A more comprehensive bibliography can be found at the following URL: www.une.edu.au/arts/LCL/disciplines/linguistics/nsmpage.htm.

The remainder of this chapter discusses techniques for isolating semantic primes, and for identifying their exponents in different languages. But before that it is useful to underline the theoretical stakes, which go far beyond their relevance to one particular approach to semantic description. First, if the NSM approach is shown to be viable, then the study of semantics, and indeed, language description at large, can be grounded in a cross-linguistically valid and intuitively intelligible framework – a framework which, moreover, submits itself to a higher standard of verifiability than any rival method. Second, if a substantial proportion of the initial hypotheses stand up to testing across the sample, we may conclude that the notion of a semantically-based universal grammar is plausible, and we may reasonably hope to have characterised a substantial portion of that universal grammar. Third, because this interpretation of universal grammar has grown out of a method of semantic description, it presents a way in which semantics and syntax are integrated from the very beginning. This effectively resolves one of the deepest and most persistent problems with generative grammar, i.e. how to graft a theory of semantics onto a pre-existing theory of syntax. In the NSM approach, this problem simply does not arise.

Table 1.1: *Languages other than English studied in the NSM framework*

Language	Primes and syntax: Comprehensive study	Descriptive semantic studies
Lao (Tai)	Enfield (vol. II)	Enfield (1999, 2001)
Mangaaba-Mbula (Austro)	Bugenhagen (1994, vol. II)	Bugenhagen (1990)
Malay (Austro)	Goddard (this volume)	Goddard (1996, 1997, 2001a, b)
Mandarin Chinese (Sinitic)	Chappell (1994a, this volume)	Chappell (1986, 1991), Ye (2001, ip, fc), Komacki (1995, 2001)
Polish (Indo-European)	Wierzbicka (vol. II)	Wierzbicka (1997)
Spanish (Indo-European)	Travis (this volume)	Travis (1998a), Cumow (1993)
Hawaii Creole English	Stanwood (1997, 1999)	
Language	Primes and syntax: Partial study	Descriptive semantic studies
Acehnese (Austro)	Durie <i>et al</i> (1994), Harkins (1995)	
Amharic (Ethiosemitic)	Amberber (2001a)	Amberber (2001b)
Arernte (PN)	Harkins/Wilkins (1994)	Van Valin/Wilkins (1993) Harkins (2001), Wilkins (1986, 2000)
Bunuba (Bunuban, nonPN)	Knight (fc)	
Cantonese (Sinitic)	Tong <i>et al.</i> (1997)	
Cree (Algonquian)	Junker (2001)	
Ewe (Niger-Congo)	Ameka (1994a)	Ameka (1990a, b, 1994b, 1996)
French (Indo-European)	Peeters (1994, 1997a)	Peeters (1993, 1997b, 2000)
German (Indo-European)		Wierzbicka (1997, 1998), Durst (1996, 2001)
Italian (Indo-European)	Maher (2000)	
Longgu (Austro)	Hill (1994), Hill/Goddard (1997)	
Japanese	Onishi (1994, 1997) Hasada (1997)	Hasada (1996, 1998, 2001) Wierzbicka (1997) Travis (1998b)
Kalam (Papuan)	Pawley (1994)	
Kayardild (Tangkic)	Evans (1994), Harkins (1995)	
Russian (Indo-European)		Wierzbicka (1992, 1997, 1999, ip), Zalizniak/Levontina (1996), Mostovaja (1997, 1998)
Samoan (Austro)	Mosel (1994)	
Sm'algyax (Pacific-NW)	Stebbins (fc)	
Thai (Tai)	Diller (1994)	
Ulwa (Misumalpan)	Hale (1994)	
Yankunytjatjara (PN)	Goddard (1991a, 1994a)	Goddard (1990, 1991b, 1992)

[Austro: Austronesian; fc: forthcoming; ip: in press, PN: Pama-Nyungan (Australia)]

1.1 Identifying semantic primes and their exponents

One can never prove absolutely that any element is an indefinable. One can only establish that all apparent avenues for reducing it to combinations of other elements have proved to be dead-ends. In that sense, the proposed NSM primes must be regarded as provisional – like all results in science. But it should also be acknowledged that some of the primes are “older” than others, in the sense that they were identified much earlier than the others. Since they have survived a longer period of scrutiny, and have proved their worth in countless explications, their claim to primitive status is stronger. The oldest members, which date back to Wierzbicka (1972) are: I, YOU, SOMEONE, SOMETHING, PART, THIS, SAY, HAPPEN, WANT, and FEEL. A couple of other current primes also had analogues in the 1972 set; for example, the current element NOT was represented by *don't want* (*diswant*), IF was represented by *imagine*.

A second group of primes also has a relatively secure standing. These are elements which were identified in the late 1980s and early 1990s during the “expanding set” phase of NSM theory (cf. Wierzbicka 1989), and which were submitted to cross-linguistic testing in the SLU studies. It comprises: PEOPLE, KNOW, THINK, THE SAME, OTHER, ONE, TWO, MUCH/MANY, ALL, GOOD, BAD, BIG, SMALL, IF, CAN, LIKE, BECAUSE, VERY, WHEN/TIME, BEFORE, AFTER, WHERE/PLACE, BELOW, ABOVE¹.

The third group consists of primes which have been proposed over the past six or seven years, and which, prior to the present collection of studies, have not been subjected to rigorous cross-linguistic testing. They are: BODY, SEE, HEAR, WORDS, TRUE, LIVE, DIE, A LONG TIME, A SHORT TIME, FOR SOME TIME, NEAR, FAR, INSIDE, SIDE, and MORE. Most of these were proposed and discussed in Wierzbicka (1996).

Of course, enumerating the proposed primes in historical sequence does not give any real picture of how the current inventory looks as a system. For this purpose it is more instructive to look at a tabular presentation, as in Table 1.2, where the primes are arranged in groups of roughly comparable elements. (This is not the only possible scheme for grouping primes; but it is a helpful one for expository purposes.) While looking over this Table, the reader is invited to consider the language-like character of the selection of items. In many ways, the inventory of primes looks like a natural language in miniature – which is, of course, exactly what it is intended to be. To a large extent, the kind of meanings included are the kind of semantic parameters which typologists and descriptive linguists tend to take for granted (and understandably so) in general language description.

Table 1.2: *Proposed semantic primes*

Substantives: I, YOU, SOMEONE, PEOPLE, SOMETHING/THING, BODY
Determiners: THIS, THE SAME, OTHER
Quantifiers: ONE, TWO, SOME, ALL, MUCH/MANY
Evaluators: GOOD, BAD
Descriptors: BIG, SMALL
Mental predicates: THINK, KNOW, WANT, FEEL, SEE, HEAR
Speech: SAY, WORDS, TRUE
Actions, events and movement: DO, HAPPEN, MOVE
Existence and possession: THERE IS, HAVE
Life and death: LIVE, DIE
Time: WHEN/TIME, NOW, BEFORE, AFTER, A LONG TIME, A SHORT TIME, FOR SOME TIME
Space: WHERE/PLACE, HERE, ABOVE, BELOW, FAR, NEAR, SIDE, INSIDE
Logical concepts: NOT, MAYBE, CAN, BECAUSE, IF
Intensifier, augmentor: VERY, MORE
Taxonomy, partonomy: KIND OF, PART OF
Similarity: LIKE

One hastens to point out that a list like this is hardly sufficient, in itself, to identify the intended meanings, because many of these English words are polysemous, and only one sense of each is proposed as a prime. When seeking to match exponents of semantic primes across languages, strictly speaking we are dealing not with full lexemes but with “lexical units” (Cruse 1986:77-78, cf. Mel’cuk 1989), i.e. with pairings of a single specifiable sense with a lexical form (a polysemous word is a lexeme which consists of more than one lexical unit). That is, we are seeking to align lexical units (across languages) which share a given putatively primitive meaning.

It is very helpful, for this purpose, to indicate for each proposed prime a set of “canonical contexts” in which it can occur; that is, a set of sentences or sentence fragments exemplifying grammatical (combinatorial) contexts for each prime. For example, the word *move* has several meanings in English, as for example in sentences (4a) and (4b) below; but only the meaning found in the (4a) sentence is proposed as a semantic prime.

- (4) (a) I can’t move.
- (b) Her words moved me.

An example of a different kind concerns the word *feel*, which in English can be used in several distinct contexts; for example, ‘to feel sad’, ‘to feel someone’s

pulse’, and ‘to feel that something is a good idea’. Merely listing the English word *feel* does not indicate which of these contexts is intended, but once a canonical contexts like (5) is provided, it becomes clear which meaning is intended as a semantic prime.

- (5) (When this happened), I felt something good/bad.

It should also be pointed out that when it is said that a semantic prime ought to be a lexical universal, in the sense of having an exact translation in every human language, the term “lexical” is being used in a broad sense. A good exponent of a primitive meaning may be a phraseme or a bound morpheme, just so long as it expresses the requisite meaning. For example, in English the meaning A LONG TIME is expressed by a phraseme, though in many languages the same meaning is conveyed by a single word (e.g. Malay *lama*, Lao *don*³, Russian *dolgo*). In Yankunytjatjara the prime BECAUSE is expressed by the ablative suffix *-nguru*. In Koasati (Louisiana), a polysynthetic language, the indefinite substantives *na:si-* SOMETHING and *a:ti-* SOMEONE are normally bound morphemes appearing as the first element of a verbal word (Kimball 1985:106, 135-139). Even when semantic primes take the form of single words, there is no need for them to be morphologically simple. For example, the English exponents of the meanings SOMEONE and INSIDE are morphologically complex, but – crucially – their meanings are not composed from the meanings of the morphological “bits” in question. That is, in meaning, SOMEONE π *some + one* and INSIDE π *in + side*. In meaning terms, SOMEONE and INSIDE are indivisible.

Finally, exponents of semantic primes may have different morphosyntactic characteristics, and even belong to different parts of speech, in different languages, without this necessarily disturbing their essential combinatorial properties. For instance, ONE is a kind of adjective in English, but a verb in Cayuga (Sasse in press); INSIDE is a preposition in English, but a noun in Longgu and a verb in Cayuga.

An interesting property of the inventory of primes is the presence of several pairs of antonyms. In the case of GOOD and BAD, the reason for this is simply that it is impossible to define either word in terms of the other; certainly *good* π *not bad*, *bad* π *not good*. This statement holds true despite the fact that there is an implicational relationship between the two; i.e. *good* implies *not bad*, *bad* implies *not good*. This highlights the fact that not all semantic relationships are of a compositional nature. There can be affiliations between meanings which are not reducible to any specifiable common component. (For more on non-compositional relationships, see section 1.5 below). In the case of the relational antonyms ABOVE and BELOW, and BEFORE and AFTER, there is a difference in perspective: *X is above Y* does not present the same perspective on the locational

relationship as *Y is below X* (in Langacker's (1987) terms, the "profiling" is different).

1.2 How were the primes identified in the first place?

The definition of the term "semantic prime" hinges on indefinability. A semantic prime is a linguistic expression whose meaning cannot be paraphrased in any simpler terms. A secondary criterion (on the hypothesis of universality) is that a semantic prime should have a lexical equivalent (or a set of equivalents) in all languages. These twin criteria mean that the number of expressions which can be entertained as candidates is rather small – because the vast majority of linguistic expressions can readily be shown to be either semantically complex and/or language-specific (Goddard 2001c). There is also a third consideration: taken as a whole, the metalanguage of semantic primes is intended to enable reductive paraphrase of the entire vocabulary and grammar of the language at large, i.e. it is intended to be comprehensive.

The current inventory is the product of a long and wide-ranging program of studies in descriptive semantics. To get a sense of what semantic primes look and feel like, we may briefly consider three of them: GOOD, SAY, and WHEN/TIME.

Example One: GOOD

How could one decompose or explain the meaning of *good* in terms which are simpler and not language-specific? It would be no use appealing to terms such as *approve*, *value*, *positive*, and *please*, as these are both demonstrably more complex than *good* and highly language-specific. The only plausible route would be to try to decompose *good* in terms of actual or potential "desirability"; for example, by saying that 'this is good' means 'I want this' or 'people want this'; but such proposals founder for several reasons. Perhaps most importantly, to label something as *good* is to present the evaluation in an objective mode, not as the desire of any specific person, or even of people in general. Explications of *good* in terms of 'wanting' yield very peculiar results in cases where *good* is used in contexts such as 'X said something good about Y', or about generic or hypothetical situations, such as 'If someone does something good for you, it is good if you do something good for this person (in return)'.

The difficulty of finding a satisfactory reductive paraphrase for GOOD makes it a candidate for the status of semantic prime. Furthermore, GOOD clearly is required for the explication of innumerable lexical items which imply positive evaluation (such as, to name a handful, *nice*, *tasty*, *kind*, *happy*, *pretty*) and for grammatical constructions such as benefactives. Upon checking in a range of languages, one finds that all languages appear to have a word with the same

meaning as English *good*. For example: Malay *baik*, Yankunytjatjara *palya*, Ewe *nyó*, Japanese *ii*. (Obviously, this does not mean that different cultures share the same views about what kind of things are GOOD.)

Example Two: SAY

Consider an exchange such as the following:

- (6) A: X said something to me.
 B: What did X say?
 A: X said “I don’t want to do it”.

How could we paraphrase away the term SAY in these contexts? It just seems impossible. It would be no good to say *verbally express*, since using terms like *express* and *verbally* would be moving in the wrong direction: in the direction of increased complexity, rather than the other way around. The only plausible line of explication appears to be via DO, WANT, and KNOW; for example, ‘X said something to Y’ = ‘X did something, because wanted Y to know something’. But this equation fails because the right-hand side could be satisfied by many actions which are non-verbal (and not symbolic).

As in the case of GOOD, there are numerous lexical items whose meanings seem to be based on SAY – most notably, the class of speech-act verbs. And there are grammaticalised meanings which involve SAY; for example, evidential particles of the so-called quotative or hearsay variety.

When we look into whether other languages have lexical equivalents to SAY, the answer appears to be yes, although the picture is not as immediately clear as with GOOD. In many languages there is a unique lexical form meaning SAY, as in English, but there are also languages in which the word for SAY can also express another meaning, such as DO or WANT. In other words, there are languages in which there is polysemy (of the non-compositional variety; see section 1.5 below) between SAY and DO, or between SAY and WANT. It goes without saying, of course, that polysemy should never be postulated without language-internal evidence. As an example of such evidence, consider the situation with Samoan, in which the verb *fai* can express two meanings – SAY and DO. The two meanings are associated with different morphosyntactic properties (Mosel 1994). *Fai* SAY is a non-ergative verb, selecting an absolutive subject, as in (7). *Fai* DO, on the other hand, selects an ergative subject, as in (8).

- (7) *Ona toe fai atu lea ’o le fafine*, “Se, ...
 then again say DIR then ABS the woman friend
 ‘Then the woman said again, “Friend, ...” (Mosel 1987:459)

- (8) ...'ua fa'apênâ lava ona fai e le tama.
 PERF like.this EMPH that do ERG the youth
 '... the youth did it like this.' (Mosel 1987:122)

As well, *fai* DO often occurs in the so-called long (suffixed) form *fai=a*, which is usual when an ergative verb is preceded by a pronoun: see (9a). This is so even when *fai* DO is used in a non-transitive frame, as in sentence (9b).

- (9) (a) Na e fai mai au oti?
 PAST you say hither PERF die
 'You said he has died?'
 (b) 'O ai na faia?
 PERF who PAST do?
 'Who did it?'

Notwithstanding the overlap in lexical form, Samoan does have a discrete linguistic exponent of SAY. Comparable facts enable an exponent of SAY to be identified in all languages which have been looked at in detail with this question in mind (see also section 1.5 below).

Example Three: WHEN/TIME

It is frequently asserted, in connection with the Sapir-Whorf hypothesis, that there are languages which have a “fundamentally different concept of time” to that of English. Whorf (1956) himself set the tone with his celebrated assertions about Hopi being a “timeless language”, but many other writers have also stated that the concept of time can vary greatly between languages and cultures. According to anthropologists such as Claude Lévi-Strauss, Marshall Sahlins, and Clifford Geertz, many indigenous peoples have cyclical or atemporal cosmologies which are very different to those of the Western world-view. One can have no quarrel with this, if what is meant is that cultures differ greatly in the extent and manner in which they elaborate basic temporal notions, and in the functional role which temporal notions play in the culture. The differences between cultures in this respect are, of course, tremendous. Contemporary “Anglo” culture, in particular, displays a veritable obsession with time, as many observers have noted. It has invented numerous methods of measuring and arranging times (clocks, calendars, schedules etc.), and employs these for regulating and ordering countless aspects of everyday life. But cultural elaboration is one thing, and semantic fundamentals are another. It is important not to confuse the cultural construction of history, ritual and myth with the linguistic encoding of temporal notions in everyday talk (cf. Keesing 1994).

A lot of the confusion in discussions of whether particular cultures have “fundamentally different” concepts of time revolves around the vagueness of the term “fundamentally”. From the NSM perspective, it would make sense to say that two cultures had fundamentally different conceptualisations if their languages differed in their stock of temporal primes. Thus, the question becomes: Does the Hopi language, for example, have equivalents to the proposed NSM temporal primes, such as TIME/WHEN, BEFORE and AFTER (among others)? Contrary to the implication of Whorf’s assertions, there is good evidence that this is in fact the case (cf. Malotki 1983, Goddard in press).

Of course, one would not expect to find in Hopi (or in any language) words which are equivalent in every way to the English word *time*, with an identical range of polysemic meanings and uses; for example, its various uses as an abstract noun (e.g. *We didn’t have time*, *Time flies*, *Times have changed*), and its role in phrasemes such as *a long time*, in compounds such as *lunchtime*, and so on. These English-specific usages do not represent examples of the proposed semantic prime WHEN/TIME, which need only occur in Hopi (if it occurs at all) in a narrow range of basic, and putatively universal combinations, such as (I DON’T KNOW) WHEN IT HAPPENED, IT HAPPENED AT THIS TIME, and THEY DID IT AT THE SAME TIME.

On this understanding, the Hopi equivalent to WHEN, both as an indefinite and as an interrogative is *hisat*, as shown in (10). Morphologically *hisat* is analysable as a question formative *hi-* (much like English *wh-*) and *-sat* TIME. In particular, *-sat* TIME can combine with the demonstrative *yàa-* THIS to form the expression *yàa-sat* AT THIS TIME, as shown in (11). An allomorph of *-sat*, namely *-saq*, combines with the Hopi exponent of THE SAME *suu-/sú-*, to form expressions meaning AT THE SAME TIME, as in (12).

- (10) *Pam hisat nima?*
 that when go home
 ‘When did he go home?’ (Malotki 1983:305)
- (11) *Taavok yàa-sat=haqam ay nu’ tsöng-moki.*
 yesterday this-time=APPROX ASSR 1SG hunger-die
 ‘Yesterday at about this time I got really hungry.’ (Malotki 1983:146)
- (12) *Pam sú-’inüu-saq nakwsu.*
 that the.same-1SG-time start.out
 ‘He started out at the same time as I.’ (Malotki 1983:144)

The three examples we have just seen – GOOD, SAY, and WHEN/TIME – should serve to illustrate some of the considerations involved in identifying semantic

primes and in ascertaining whether they have equivalents in other languages. There will be more examples later in the chapter, and in Chapter Two.

We now focus in more detail on some methodological issues that we have already seen arise – allolexy, portmanteaus, and polysemy.

1.3 Allolexy and portmanteaus

The concept of allolexy was foreshadowed as early as 1980, when Wierzbicka observed that: “The language of explications cannot be kept entirely free of contextual variation. For example, to assure the readability of English-based explications both the forms ‘me’ and ‘I’ have to be used, standing for the same primitive” (1980:36). Later (Wierzbicka 1989) the term “allolexy” was coined to designate situations in which several different words or word-forms (allolexes) express a single meaning in complementary contexts. Initially, two types of allolexy were recognised.

Positional allolexy is illustrated by English *I* and *me*. It is impossible to state, in the form of a substitutable paraphrase, any semantic difference between *I* and *me*. That is, *I* in *I did something* or *I don’t know* has the same meaning as *me* in *You did something to me* or *People might say something about me*. The distribution of the alternate forms is determined solely by position, i.e. *I* pre-verbally and *me* elsewhere.

Another kind of allolexy is combinatorial allolexy. This can be illustrated by the relationship between *something* and *thing*. In combination with determiners and quantifiers, *thing* functions as an allolex of SOMETHING. For example:

- (13) this thing = this something
 the same thing = the same something
 all things = all somethings

(The situation with English *person* is not immediately clear. It seems, on the one hand, that *person* is a combinatorial allolex of SOMEONE, i.e. *this someone = this person, the same someone = the same person*, etc., but at the same time *person* also seems to function as the singular or “individuated” form of PEOPLE, cf. *one person, many people*. See Wierzbicka, vol. II section 2.1.2 for discussion.)

Another example of combinatorial allolexy is English *else*, which functions as an allolex of OTHER when in combination with indefinites. For example:

- (14) something else = another something
 someone else = another someone

Some observers have expressed disquiet about the concept of allolexy, suspecting that it may be invoked too readily in order to “find” exponents of semantic primes where in reality there are none. So it must be stressed: a claim of allolexy hinges entirely on a claim that the expressions which are supposed to be in an allolexical relationship do not differ in meaning in any paraphrasable way. In other words, a claim that X and Y are allolexes can be disproved by producing a paraphrase of either term, which serves to identify a semantic difference between them. It would not be viable, for example, for someone to claim that English *want* and *intend* were allolexes, because it can be shown that *intend* contains a semantic component based on THINK which is absent from *want*. Similarly, it would not be viable to regard *say* and *utter* as allolexes, because it can be shown that *utter* contains a semantic component based on WORDS which is absent from *say*.

Recently, a special variety of combinatorial allolexy has been recognised which has particular theoretical interest. It concerns language-specific case categories of arguments of the NSM predicates. The key fact is that the arguments of semantic primes do not receive uniform morphological treatment either within, or across, case-marking languages. For example, in European languages the verbs THINK, SAY, DO, SEE, HEAR, WANT, and FEEL typically select “subjects” of the same case category (i.e. nominative), but in other languages the subjects of these primes may fall into different categories. In Yankunytjatjara, THINK, SAY, DO, SEE and HEAR select ergative case subjects, while WANT and FEEL take nominative subjects (Goddard 1994); in neighbouring Arrernte, only DO, SEE and HEAR take ergative subjects (Henderson and Dobson 1994). In some Indo-Aryan languages, subjects of FEEL, WANT, SEE and HEAR appear in the dative case (Masica 1991:346ff).

Are these variations in case-marking “meaning-bearing”? The answer to a question like this depends to some extent on one’s concept of meaning. If we confine ourselves to meaning in the sense of a specifiable, paraphrasable component, the answer must be in the negative. Whether a semantic prime like DO, SAY, or THINK selects a subject in the ergative, nominative, or dative case cannot carry any separable (i.e. paraphrasable) meaning. If it did, a word like SOMEONE would have different meanings in expressions corresponding to SOMEONE DID..., SOMEONE SAYS..., SOMEONE THINKS..., and so on – both within each language, and across languages. Rather, the case-forms of the arguments of semantic primes must be regarded as combinatorial variants (allolexes) which are lexically conditioned, i.e. determined on a language-specific basis by the identity of the prime. On this view, it is a language-specific fact about Yankunytjatjara, for example, that subjects of DO, THINK, SAY, SEE, and HEAR require a certain marked (ergative) form; it is a language-specific fact about Arrernte that subjects of DO, SEE, and HEAR (but not SAY and THINK) require a

certain marked form (also normally called ergative); and so on.

One hastens to add that these comments do not apply when a particular language offers a **choice** between, say, nominative vs. ergative subject (or between nominative vs. dative). In this kind of situation, we can expect one of the cases to be semantically unmarked, and the other to convey an explicable, paraphrasable meaning (specifiable in terms of the prime in its unmarked case frame, along with other elements). Even more important, there is no denying that case-selection of complex (i.e. non-primitive) predicates is semantically governed. One can often – perhaps always – predict the case-frame(s) of a complex predicate from its compositional semantics. To give a simple example, it is no coincidence that in Yankunytjatjara all verbs of doing, verbs of saying, and verbs of thinking select ergative case subjects. It follows from the fact that the Yankunytjatjara primes *palyani* (DO), *wangkanyi* (SAY), and *kulini* (THINK) themselves select ergative subjects. For more on the question of language-specific surface cases, see Wierzbicka (vol. II, section 4.4).

A third kind of allolexy – very different to those considered so far – can be called “inflectional allolexy”. Consider obligatory tense-marking in English. In an English sentence like *I did something*, as in (15a) below, the word *did* is semantically complex, conveying both DO and past tense. But notice what happens if we “paraphrase out” the semantic content of past tense (i.e. ‘at some time before now’), as in (15b), which is the way that the meaning of sentence (15a) would be represented in natural semantic metalanguage. In this context, choice of the form *did* as opposed to *do* becomes automatic, since it would be ungrammatical to exchange the forms.

- (15) (a) I did something.
 (b) At some time before now, I did/*do something.

The conclusion to be drawn is this: In ordinary English, *do* and *did* are semantically distinct; and obviously, therefore, not in an allolexical relationship. In (15a) *did* is not an allolex of *do*. But in an English-based NSM, as in (15b), *do* and *did* **are** allolexes – because, in the NSM, time-reference will always be independently represented in lexical terms, and consequently the distribution of *did* as opposed to *do* can be predicted from the surrounding context.

There are two implications of this result. First, it dramatises the difference between a full natural language, in this case English, and the natural semantic metalanguage based upon it. Second, it enables NSM theory to resolve a difficulty which has puzzled many observers, namely, how to reconcile the existence of language-specific inflectional categories with the claim that there can be perfect semantic equivalence between the NSMs based on different

languages. The full description of any NSM must include a tabulation of the semantic content of all the inflected word-forms of that language, somewhat in the style of the Word-and-Paradigm approach to inflection. For example, a description of an English-based NSM must contain information stating that when an NSM clause contains the time adjunct ‘at some time before now’, the form *did* must be substituted for DO, that *saw* must be substituted for SEE, that *wanted* must be substituted for WANT, and so.

Given this, full translatability between NSMs can be assured. This can be illustrated by comparing the (a) and (b) sentences below, which show how two sample sentences composed of identical primes would be expressed in English and Malay, a language with no inflectional or positional allolexy. Conveniently, in these examples the words occur in the same order in the two languages. (The only difference is that Malay has the ligature *yang* intervening between SOMETHING *sesuatu* and BAD *buruk*, in the expression *sesuatu yang buruk*. ‘something bad’). English *did* and *do*, in the (a) sentences, both correspond to a single Malay word-form *buat* DO in the (b) sentences. English *I* and *me*, in the (a) sentences, both correspond to the single Malay word-form *aku* I in the (b) sentences. Even so, it is obvious that there is no difficulty in transposing meanings between the two languages.

- (16) (a) At some time before this, I did something bad.
 (b) *Pada masa sebelum ini, aku buat sesuatu yang buruk.*
 at time before this I do something LIG bad
- (17) (a) If I do this, people will think something bad about me.
 (b) *Kalau aku buat ini, orang akan fikir sesuatu*
 if I do this people will think something
yang buruk pasal aku.
 LIG bad about me

There is much more that could be said on the topic of allolexy, but for the time being we will leave the matter here.

Distinct from allolexy, but related to it insofar as it is another way in which primitive meanings can appear in a variety of guises, is the phenomenon of portmanteaus of semantic primes – that is, the situation in which a single word (bound morpheme, phraseme) expresses a combination of semantic primes. A simple example is English *can't*, combining CAN+NOT. It seems that many languages have portmanteaus involving negation. An outstanding example is Minnan (Taiwan), which has no less than eight monolexemic negative words.

Aside from the simple negator/negative adverb *bo*²⁴ NOT (which can also function as a verb, meaning THERE ISN'T and NOT HAVE) there are: *m*²² 'don't', *bue*²² 'can't', *be*²² 'not yet', *mai*²⁴ 'don't do', *bian*⁵³ 'no need', *boai*²¹ 'not want to', and *mno*⁵³ 'better not' (Chappell 1994b).

Portmanteaus with LIKE are also common. In Yankunytjatjara, *alatji* is a portmanteau for LIKE THIS, equivalent to *nyanga purunypa*. Many languages have such portmanteaus, or even more specialised ones for combinations such as DO LIKE THIS, HAPPEN LIKE THIS, or SAY LIKE THIS. Portmanteaus with DO are also common; for example, the Australian language Kayardild has portmanteaus for 'do this', 'do well', 'do badly', and 'do like someone else' (Evans 1994). It may be that in some languages certain combinations of semantic primes are expressible only via a portmanteau. In Polish, for example, there is a common expression *dawno* (*temu*) 'a long time ago', which presumably means A LONG TIME BEFORE (NOW). But although exponents exist for the components of this complex expression (*dlugo* A LONG TIME, *przed* BEFORE, *teraz* NOW), it is extremely odd to combine them; **dlugo przed teraz* sounds much worse than *this someone* in English.

1.4 When exponents of primes have secondary, polysemic meanings

Polysemy is frequently a complication when trying to identify primes and match them up across languages. Often, the range of use of exponents of the same prime won't match up, because aside from the shared, identical meaning, the words in question also have additional meanings which are different from language to language. Careful language-internal analysis is required. A couple of examples will help clarify the kind of analysis which may be called for.

Example One

The range of use of the Yankunytjatjara exponent of WANT *mukuringanyi* does not correspond to that of English *want*, because *mukuringanyi* can also be used in ways which approximate English 'like, be fond of (a person)' (Goddard 1991b). At first blush it can appear as if the Yankunytjatjara word has a general meaning not corresponding to that of any English word, but on closer examination this impression disappears. The meanings 'like, be fond of' are only found when the complement of *mukuringanyi* is an NP denoting a person, and this NP always carries purposive case *-ku*. The meaning WANT, on the other hand, is associated with a clausal complement, e.g. 'want to do', 'want something to happen'. Furthermore, it can be shown that the 'like, be fond of' meaning expressed in the construction with a personal complement NP is not semantically simple. It can be paraphrased, but the paraphrase relies on the clausal complement construction. For

example, one component of *Person-X Person-Y-ku mukuringanyi* is *X Y-ku wiru palyantjikitja mukuringanyi* ‘X wants to do good (things) for Y’. This fact establishes the semantic priority of the WANT meaning over the ‘like, fond of’ meaning. It becomes clear that the primary meanings of English *want* and Yankunytjatjara *mukuringanyi* are fully equivalent. Similar polysemies involving WANT are found in many languages; for example, the Spanish word *querer* not only has the semantically primitive meaning WANT, but also a secondary meaning, roughly ‘like/love (a person)’; see Travis (this volume, section 4.2.3).

Example Two

The exponent of HAPPEN is often polysemous, having a secondary meaning approximating ‘appear’ or ‘arrive’. The Australian language Yolngu Matha has both (Cooke and Goddard 1997). In the Djambarrpuyngu dialect, HAPPEN is expressed by *malɲʹthu-*, which can also mean ‘appear’. In the Gumatj dialect, HAPPEN is expressed by *buna-*, which can also mean ‘arrive’. The supposition that these words are monosemous is hardly credible in view of examples like those in (18) and (19) below, which have an abstract substantive phrase such as *ɲula=nhä manymak/ɲamakurru* ‘something good’ as subject.

Djambarrpuyngu:

- (18) *ɲula=nhä manymak malɲʹthu-rr ɲarra-k.*
 something good “appear”-3RD 1SG-DAT
 ‘Something good happened to me.’

Gumatj:

- (19) *ɲula=nhä ɲamakurru ɲarra-ku buna-na.*
 something good 1SG-DAT “arrive”-3RD
 ‘Something good happened to me.’

The polysemy is not difficult to understand once we see that ‘appearing’ and ‘arriving’ both involve something HAPPENING IN A PLACE, after which something or someone is in the place in question. In the case of ‘appearing’, there is presumably an additional component involving being ‘able to see’ something, and in the case of ‘arriving’ there is an additional component involving prior motion. This kind of polysemy recurs in various languages, including Mangaaba-Mbula, Ewe, and French. (An older variety of English had a similar use for *happen*, cf. sentences like ‘He happened upon me just as I was reading the letter’.)

Other frequent polysemies in which semantic primes are involved include: DO with ‘make’ (Malay, Arrernte, Samoan, Kalam), SAY with ‘speak’ or ‘make sounds’ (Thai, Mandarin, Yankunytjatjara, Kalam), BEFORE with ‘first’, ‘go ahead’, or ‘front’ (Lao, Samoan, Kayardild, Ewe), FEEL with ‘taste’, ‘smell’, or

‘hold an opinion’ (Acehnese, Ewe, French, Mandarin, English), BECAUSE with ‘from’ (Yankunytjatjara, Arrernte), WANT with ‘like’, ‘love’ or ‘seek’ (Spanish, Ewe, Ulwa). Some of these, and additional examples, will be discussed later.

1.5 Non-compositional polysemy (motivated homonymy) between primes

The kind of polysemies we have looked at so far may be confusing at first, but they are usually not too difficult to figure out, and from a theoretical point of view there is nothing very surprising about the fact that a word may have two (or more) related meanings, one indefinable and the other definable. Much less expected was the finding of the SLU project (Goddard and Wierzbicka Eds 1994) that in some languages a single form can express two different indefinable meanings. For example, in Yankunytjatjara a single form *kutjupa* can express both SOMEONE and OTHER. In Arrernte a single form *peke* can express both MAYBE and IF. As we have seen above, in Samoan a single form *fai* expresses both DO and SAY. Similar overlaps recur across languages and they are not semantically arbitrary. IF and MAYBE, for instance, have enough affiliation that it is not jarring to discover that both are expressed by the same element in some languages; at least, not as jarring as it would be to find that IF was expressed by the same form as YOU, TWO, or BAD! This phenomenon has been dubbed “non-compositional polysemy”.

The key to identifying non-compositional polysemy is the existence of different syntactic properties. Some examples may serve to clarify this point.

Example One

In Yankunytjatjara *kutjupa* expresses the meaning OTHER when it is adnominal, as in (20), and the meaning SOMEONE when it is the head of an NP in its own right, as in (21). It might be thought that the latter construction is elliptical, with an implied head noun such as *anangu* ‘people/person’, but this analysis is not viable in view of the acceptability of sentences such as (22), given that God could never be referred to as an *anangu* (Goddard 1994). On account of the distinct combinatorial contexts, there can be no confusion about which meaning is intended.

(20) *ngayulu munu kungka kutjupa*
 1SG and woman other
 ‘me and another woman’

(21) *Kutjupa-ngku iji katingu!*
 someone-ERG baby took
 ‘Someone took the baby!’

- (22) *Kutjupa-ngku rawangku nyuntunya nyanganyi munu kulini.*
 someone-ERG always 2SG:ACC see and think
Nganalu? Goda-lu.
 who-ERG God-ERG
 ‘Someone is always watching and thinking about you. Who? God.’

Example Two

A more complex example of polysemy is found in the Papuan language Kalam, where a single stem *g-* expresses DO, HAPPEN, and FEEL. Let us consider first the DO–HAPPEN polysemy, analogues of which turn up sporadically in languages around the world. There are certain intransitive contexts in which *g-* can only mean HAPPEN, as in (23). There are certain contexts where *g-* can only mean DO, as in (24a) and (24b).

- (23) *Mñab nb ak ned wagn ak g g-ek*
 country such this first origin the happen it.happened
mñab Aytol-jl alym...
 country Aytol-jl down.there
 ‘The place where this originally happened was down there at Aytol-jl.’
 (Pawley 1994:408)
- (24) (a) *Pen g-pan g-pin.*
 reciprocally you.did I.did
 ‘I did the same as you.’ (Pawley 1994:404)
- (b) *Gos etp agi ap kun g-pan?*
 thought what having.thought come such you.did
 ‘Whatever were you thinking that you came and did that?’
 (Pawley 1993:396)

On the other hand, there are sentences like (25) which are ambiguous between HAPPEN and DO.

- (25) *Tap etp g-p?*
 thing what happen/do-3SG:PERF
 ‘What’s happened?’ or ‘What has he done?’ (Pawley 1994:408)

The crucial analytical question is whether it is necessary to adopt a polysemy interpretation (as the presentation so far has assumed), or whether it would be possible to sustain a monosemy interpretation. A monosemy interpretation would mean claiming that *g-* has a unitary meaning in (23)–(24) which is Kalam-

specific and simply cannot be stated in English, and that the apparent differences (from an English perspective) are imposed by the lexico-grammatical contexts. But if *g-* has a unitary meaning, then (25) cannot be ambiguous after all – which seems unlikely in the light of Pawley’s description.

Furthermore, there is a salient difference between a HAPPEN interpretation and a DO interpretation concerning “aboutness” (Sasse 1987). A question like ‘What happened’ is not about any particular person, whereas ‘What did he/she do?’ is about a specific person. To claim that *g-* has a unitary meaning in (25) would mean claiming that this difference does not exist in Kalam, and that a Kalam speaker would be completely indifferent to it.

An interesting question arises: How could a Kalam speaker identify the distinct meanings involved, given that both are expressed by the same lexical form? Presumably – by reference to other, unambiguous, sentences. The Kalam speaker can say: “it can mean the same as *g-* in example (23) [i.e. HAPPEN], or it can mean the same as *g-* in the examples in (24) [i.e. DO]”.

As for the meaning FEEL, it is readily separated from the other two meanings of *g-* because it is found in a distinctive experiencer construction. This takes the form: Experiencer–Condition–Verb+tense+3SG. The experiencer appears as a noun or free pronoun with objective case-marking as in (26).

- (26) *Yp tep g-p.*
 me good feel-3SG:PERF
 ‘I feel good.’

Example Three

For a more extreme example, we can take Bunuba, a polysynthetic language from the Kimberley region of north-west Australia (Knight forthcoming; cf. Rumsey 2000). Polysemies involving SAY, DO, and sometimes other elements, are common in the languages of this area. In Bunuba, a simple use of the root *ma-*, with a 3rd singular subject, is no less than five-ways ambiguous – between SAY, DO, THINK, FEEL and HAPPEN.²

- (27) *Ŋgaanyi=ma φ-miy?*
 what?=I/I 3SG:S-MA-PAST
 ‘What did she do/say/think/feel?’ or ‘What happened?’

The meaning HAPPEN has very distinctive syntactic restrictions, which make it easy to separate from the others. Specifically, it only ever takes 3SG or 3NSG subject (indicating ‘something’, as in ‘something [3SG] happened’, or ‘things’, as in ‘some things [3NSG] happened’). When an extra argument (say, X) is added by

way of OBLique pronominal cross-referencing, the meaning corresponds to ‘something happened to X’.

For reasons of space, I report here only Knight’s (forthcoming:Ch.9) arguments regarding the status of the SAY-THINK polysemy. To begin with, she observes that “speakers of Bunuba have no difficulty in discerning one meaning from another”. She then notes that the meaning *ma* SAY is associated with certain unambiguous syntactic contexts, as when it introduces a direct quote, as in (28). The meaning SAY also appears unequivocally when an extra argument is added to *ma* via the OBLique cross-referencing strategy, in which case the new argument assumes the role of addressee (or, if context permits, topic³).

- (28) *Yaninja wau wurr-ma-iy-nhingi.*
 alright whoa 3NSG:S-MA-PAST-3SG:OBL
 ‘Alright, “Whoa!” they said to him.’

The existence of a real language-internal contrast between SAY and THINK is dramatised when the question is raised: How, in Bunuba, could one express a meaning such as ‘I know what you said but what are you thinking?’ When Knight explored this question with consultants, it emerged that the expression *ma* + *thangani* ‘mouth/words’ means unambiguously SAY and that *ma* + *gun.gulu* ‘head’ means unambiguously THINK.

- (29) *Ngayini binarri nganggu thangani*
 1SG:PRO know 2SG:OBL mouth/words
nganggu gun.gulu nginjaga gi-nj-i-ma?
 2SG:OBL head what PRES-2SG:S:NONFUTURE-INS-MA
 ‘I know what you said (your words) but what are you thinking?’
 (lit. *ma* + ‘head’)?

Expressions like the following are therefore unambiguous; and the existence of these expressions testifies to the existence in Bunuba of SAY and THINK as distinct meanings of lexical units.

- (30) (a) *Ngaanyi=ma ø-ma-iy thangani?*
 what=/I 3SG:S-MA-PAST mouth
 ‘What did she say?’
- (b) *Ngaanyi=ma ø-ma-iy gun.gulu?*
 what=/I 3SG:S-MA-PAST head
 ‘What did she think?’

Example Four

Linguists seem to agree that the part-whole relationship is fundamental to the vocabulary structure of all languages, but there are certainly languages which do not have a unique lexical form for the postulated semantic prime PART (OF). This does not necessarily mean, however, that these languages lack a lexical unit with the meaning PART. In three unrelated languages in which such an apparent gap has been investigated (Acehnese, Mangaaba-Mbula, Yankunytjatjara) it appears that PART exists as the meaning of a lexical unit of the same lexeme which can also mean SOMETHING, THING, or WHAT.

In these languages the meaning PART is expressed when the relevant lexical form is used in a grammatical construction associated with possession. (It is as if instead of saying, for example, ‘the nose is a part of the face’ one says “the nose is a thing of the face”.) Examples follow.

Yankunytjatjara:

- (31) *Puntu kutju, palu kutjupa-kutjupa tjuṭa-tjara.*
 body one but something-RDP many-having
 ‘(It is) one body, but with many parts.’

Acehnese:

- (32) *Bak geuritan angèn na lè peue.*
 at vehicle wind there.is many what/something
 ‘A bicycle (lit. wind-vehicle) has many parts.’

Mangaaba-Mbula:

- (33) *Iti tomtom na koroṅ-ṅa-nda booṣo kumbu-ndu, nama-nda.*
 we person GIV thing-NMZ-our many leg-our head-our
 ‘We people, our parts are many: our legs, our heads, ...’

The fact that the notion of PART is expressed using the same lexical form as for SOMETHING is obviously no coincidence, since a PART of something is itself a something (the notion PART can be termed a “relational substantive”). The absence of a unique term for PART is certainly notable, and it may indicate, in an indexical sense, that the notion of PART is less culturally salient than it is in languages which have a unique exponent for PART.

Even so, the fact remains that there are Acehnese, Mangaaba-Mbula, and Yankunytjatjara expressions (lexical units) with the meaning PART. The semantic metalanguages based on these various natural languages will still have the same expressive capacity, and it remains possible to transpose meanings from one NSM to another in a regular fashion.

1.6 The syntax of semantic primes

Allolexy... Polysemy... Non-compositional polysemy. Clearly a natural semantic metalanguage based on a natural language is a far cry from an ideal “philosophical language”, in which there would be perfect one-to-one correspondence between form and meaning. For some commentators, this is all too much. Cattelain (1995), for example, finds allolexy and polysemy suspicious and disturbing. In his summary of the findings of the SLU project he accepts only unique exponents as truly satisfactory, describing as “problematical” all cases where the SLU authors had recognised allolexy or polysemy.

This nervousness is perhaps understandable, but it is unjustified. It would be unrealistic to expect every natural language to harbour an ideal “one form, one meaning” semantic metalanguage. Natural languages are not designed for the convenience of linguists. Although it appears, on the available evidence, that every natural language contains all the necessary raw material to furnish an adequate semantic metalanguage, it is also true that every natural language has some individual, language-specific characteristics which must be retained in the natural semantic metalanguage – at least, if that metalanguage is to retain a sufficiently natural quality that it remains intelligible to native speakers.

This means that investigating the viability of a universal semantic metalanguage necessarily requires us also to identify and focus on language-specific differences. One way to think about this is as follows. Every language *L* contains an irreducible semantic core, with universal lexical and syntactic (combinatorial) properties. As we describe, for any language, the *L*-specific realisation of this core, we are describing what may be called the “core grammar” of that particular language. That is, in the process of identifying and describing the local exponents of the universal semantic primes, we are also describing the essential morphosyntactic characteristics of that local language.

It seems evident that a language-specific core grammar will establish a good deal about the general typological profile of that language – if only because a natural semantic metalanguage constitutes a broad, semantically-based sample of any language. A core grammar will show, for example, whether the signalling of basic semantic-syntactic relationships is accomplished in language *L* predominantly by word order, by morphological marking (and if so, whether by head-marking or dependent-marking), or by other means. It will show whether *L* has verbal inflection, whether it has person-agreement, whether it has bound pronominal affixes. It will disclose how basic specifications of time, place, and quantification are accomplished (including whether these systems are assimilated to noun-like morphosyntax, to verb-like morphosyntax, or constitute separate grammatical subsystems). In this way, the establishment of any *L*-specific NSM

can be seen as a foundational step in the comprehensive grammatical description of that language.

At the present time, the use of NSM analysis as a technique for overall language description is still in its early stages of development. It can be said, however, that once the L-specific morphosyntactic peculiarities of the exponents of semantic primes are established, we will presumably find that many of these are “passed on” to semantically complex lexical items. It may even turn out that most of the morphosyntactic peculiarities of L-specific complex lexical items are inherited from the morphosyntactic characteristics of their semantic components. These possibilities are being mentioned to make the point that the L-specific properties of core grammars (patterns of polysemy, allomorphy, word-class characteristics, etc.) should not be seen as a mere nuisance to be shunted aside. They constitute the essential individuality or “personality” of each language – the minimal set of properties which makes this language different from all others, and as such they deserve to be studied in their own right. This is not, however, the main focus of the present set of studies, and a thorough exploration of how NSM analysis can be applied as a bottom-up technique of language description will have to await a subsequent study.

The priority of the present volumes is the universal aspects of the syntax of the natural semantic metalanguage, for three main reasons. First and foremost, the semantic metalanguage has not been fully described until its syntax (i.e. combinatorial properties) has been fully specified. Nor, until this has been done, can we know whether the goal of a universal semantic metalanguage is realisable at all. The existence of some shared or matching combinatorial patterns across all languages is just as important to the project as the existence of shared semantic primes. Second, the syntactic (combinatorial) properties of a prime form part of its distinctive “signature”. By knowing exactly what we expect of the combinatorial properties of each prime, we are better able to zero in on them in particular languages.

Third, the combinatorial properties of semantic primes constitute the basis for universal grammar, both in the sense that they are literally universals of syntax, and in the sense of providing linguists with a firm and universal basis on which to develop a descriptive-typological framework for describing languages. These themes will be further pursued in Chapter Two, and in the closing chapters of Volume II.

Abbreviations

ABS	absolute	NONFUTURE	nonfuture tense
APPROX	approximation	OBL	oblique pronominal
ASSR	assertive	PAST	past tense
DAT	dative	PERF	perfect
DIR	directional	PRES	present tense
EMPH	emphatic particle	PRO	core pronoun
ERG	ergative	1SG	first person singular
GIV	given	2SG	second person singular
I/I	interrogative/indefinite	3RD	third inflection
INS	insert	3SG	third person singular
LIG	ligature	RDP	reduplication
NSG	non-singular	S	intransitive subject
NMZ	nominalisation		

Notes

1. Actually, there is one slight inaccuracy in this list, since in the SLU studies (Goddard and Wierzbicka Eds 1994) the element BELOW was represented instead as *under*.
2. Knight's (forthcoming) analysis differs from that of Rumsey (1990, 2000), who regards *ma-* as having a single undifferentiated meaning between, for example, DO and SAY.
3. It might seem that the possibility that an OBLique argument of *ma* can indicate a locutionary topic, i.e. SAY SOMETHING ABOUT Y, re-introduces the possibility of ambiguity with THINK, specifically with THINK SOMETHING ABOUT Y. In fact this ambiguity does not arise because an OBLique argument of *ma* can never be interpreted as a "topic of cognition". To express the meaning 'X thought about Y' in Bunuba, one uses a separate lexical form *linga*+RA2 'think about' (Knight forthcoming:269-270). The alternation between *ma* and *linga*+RA2, which can be viewed as a kind of allolexy, provides another argument in favour of *ma* having a meaning THINK which is distinct from SAY.

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